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ACIDIC PRECIPITATION IN ONTARIO STUDY

CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS AUGUST 31, 1981 - JANUARY 4, 1983

August 1984

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Ontario
Ministry of the Environment

The Honourable
Morley Kells
Minister

Dr. Allan E. Dyer
Deputy Minister

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CUMULATIVE AMBIENT AIR CONCENTRATION LISTINGS

AUGUST 31, 1981 - JANUARY 4, 1983

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TABLE OF CONTENTS

			Page
PART I	INTRODUCTION		III
PART II	STATION DESCRIPTION AND LOCATION MAP		V
PART III	SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS		
	Station Name	Map Ref. No.	
	Colchester	01	1
	Palmerston	08	3
	Port Stanley	03	5
	Shallow Lake	09	7
	Wilkesport	04	9
PART IV	CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS		
	Station Name	Map Ref. No.	
	Campbellford	13	11
	Dorset	20	13
	Milton	10	15
	Uxbridge	11	17
PART V	SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS		
	Station Name	Map Ref. No.	
	Dalhousie Mills	16	19
	Golden Lake	17	21
	Kaladar	14	23
	Smith's Falls	15	25

PART VI **NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS**

Station Name	Map Ref. No.	
Attawapiskat	28	27
Gowganda	25	29
Killarney	23	31
Mattawa	22	33
McKellar	21	35
Moonbeam	27	37

PART VII **NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS**

Station Name	Map Ref. No.	
Dorion	31	39
Ear Falls	35	41
Nakina	30	43
Pickle Lake	36	45

PART I

INTRODUCTION

INTRODUCTION

The data listed herein are a summary of the results acquired from the APIOS cumulative ambient air sampling network from start-up time to January 4, 1983. Collection of ambient air samples began in the fall of 1981 at certain selected APIOS sites on an approximately monthly interval. As of January 5, 1982, a 28 day sampling period was adopted. All data presented in this report have been screened for validity. Remarks and qualifications have been appended to records, and/or results where necessary. The screening procedure involves the application of Dixon Ratio Test to all the available data from a given station and to concurrent data from all the sites in the same region over a given sampling period. Field comments are referred to in order to assist in the identification of problematic samples. Samples that were determined to be obvious outliers were flagged as unreliable ("U").

The sampler utilized for daily air sampling is the Metrex AS-2 low volume air sampler. The sampler is loaded and the filter pack is exposed for 28 days beginning at 0700 h EST and terminating at 0700 h EST at the end of the sampling period. Sampling details are described in another document[1].

Station Identification

The station identification is defined by four descriptive fields (e.g. - Dorset/Cumulative/LoVol #20). The first field refers to the sampling location. The second and third fields describe the sampling interval and the instrumentation used respectively. The last numeric field refers to the index code utilized on the location map.

Cumulative Ambient Air Concentration Listings

All analytical results presented in this report were blank corrected. Each filter pack is loaded with a Whatman 40 filter, a nylon filter and a pair of Whatman 41 filters with the first two filter types being upstream and the last filter type being downstream. The Whatman 40 filter is analysed for particulates including $SO_4^=$, NO_3^- and some trace metals. The nylon filter is analysed for gaseous HNO_3 and the Whatman 41 filter (impregnated with K_2CO_3 - glycerol) is analysed for

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1. Chan, W.H., Orr, D.B. and Vet, R.J. (1984). Acidic Precipitation in Ontario Study - An Overview: The Cumulative Wet/Dry Deposition Network. Ontario Ministry of the Environment Report #ARB-164-84-ARSP.

gaseous SO_2. The reported parameter "TOTL NO3" represents total nitrates and is calculated by the summation of $N\text{-}HNO_3$ and $N\text{-}NO_3$. No individual value of particulate nitrate and nitric acid are reported due to potential artifacts of the filter media used. If a detection limit is encountered in the calculation of "TOTL NO3" then a value corresponding to one half the detection limit is utilized. Remark codes (e.g. -U, A) appended to individual results are defined in a later section.

Field Comment Code Index

A - Sampler malfunction
B - Known hydro failure
C - Suspected hydro failure
D - Known filter pack leak
E - Suspected filter pack leak
F - Gasmeter not equal to rotameter
G - Flow line problems
H - Known contamination
I - Suspected contamination
J - Heavy dew or fog
K - Sample not submitted

Office Comment Code Index

F - Data invalidated - if the daily average flow volume is outside the range of (2880 ± 50%) litres per day.
Z - Abnormal sampling period.

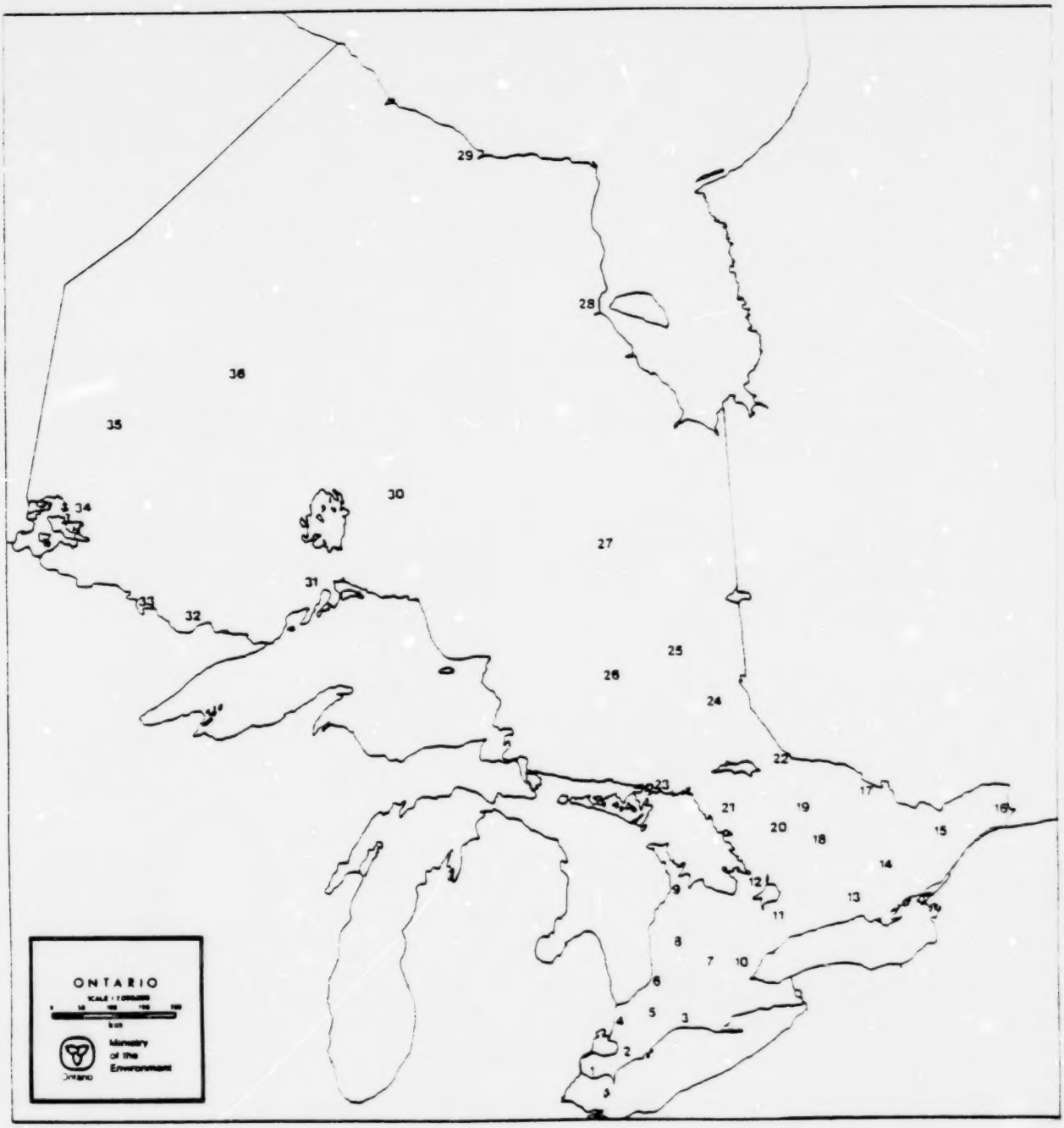
Result Remark Code Index

> - actual result greater than value reported
< - actual result less than value reported
<T - actual result less than criterion of detection
<W - no response, minimum possible result reported
A - approximate value
U - unreliable result

PART II

STATION DESCRIPTION AND LOCATION MAP

STATION LOCATION MAP



* 1 - COLCHESTER
2 - MERLIN
* 3 - PORT STANLEY
* 4 - WILKESPORT
5 - ALVINSTON
6 - HURON PARK
7 - WATERLOO
* 8 - PALMERSTON
* 9 - SHALLOW LAKE
*10 - MILTON
*11 - UXBRIDGE
12 - COLDWATER
*13 - CAMPBELLFORD
*14 - KALADAR
*15 - SMITHS FALLS
*16 - DALHOUSIE MILLS
*17 - GOLDEN LAKE
18 - WILBERFORCE
19 - WHITNEY
*20 - DORSET
* 21 - MCKELLAR
* 22 - MATTAWA
* 23 - KILLARNEY
24 - BEAR ISLAND
* 25 - GOWGANDA
26 - RAMSEY
* 27 - MOONBEAM
* 28 - ATTAWAPISKAT
29 - MINISK
* 30 - MAKINA
* 31 - ORION
32 - QUETICO CENTRE
33 - LAC LA CROIX
34 - EXP. LAKES AREA
* 35 - EAR FALLS
* 36 - PICKLE LAKE

* ALL SITES ARE EQUIPPED WITH WET DEPOSITION SAMPLING INSTRUMENTATION.
THOSE SITES LABELLED (*) ALSO HAVE CO-LOCATED LO-VOL AIR SAMPLING EQUIPMENT.

APIOS CUMULATIVE WET/DRY DEPOSITION NETWORK SITE DESCRIPTIONS

MOE REGION	STATION NAME	ELEVATION (m above MSL)	LATITUDE (North)	LONGITUDE (West)	UTM GRID CO-ORDINATES (Northing)	(Easting)
Southwestern	Colchester	183	41°59'15"	82°55'41"	4630000	340300
	Merlin	191	42°10'47"	82°13'30"	4676400	398950
	Pt. Stanley	213	42°40'22"	81°09'55"	4724050	486700
	Wilkesport	183	42°42'11"	82°21'13"	4728350	389150
	Alvinston	221	42°49'36"	81°50'04"	4942000	431550
	Shallow Lake	229	44°30'58"	81°05'24"	4936200	492850
	Palmerston	389	43°48'19"	80°50'12"	4850050	507750
	Huron Park	250	43°17'28"	81°30'03"	4793000	439350
	Waterloo	343	43°28'39"	80°35'09"	4813750	533500
Central	Dorset	320	45°13'26"	78°55'52"	5009650	662400
	Milton	221	43°31'05"	79°55'50"	4818600	586350
	Uxbridge	294	44°12'46"	79°12'38"	4896800	643000
	Wilberforce	396	45°00'56"	78°12'58"	4988150	719400
	Campbellford	175	44°17'28"	77°47'33"	4907600	277150
	Coldwater	280	44°37'31"	79°32'08"	4942200	615900
Southeastern	Kaladar	294	44°41'31"	77°09'18"	4950800	329250
	Smith's Falls	122	44°56'41"	75°37'48"	4977100	423950
	Dalhousie Mills	69	45°19'00"	76°28'13"	5018100	341550
	Golden Lake	160	45°36'48"	77°12'03"	5053200	328400
Northeastern	McKellar	294	45°30'57"	79°35'19"	5040600	583950
	Killarney	183	45°59'26"	81°29'18"	5092900	462200
	Mattawa	198	46°16'45"	78°49'19"	5127150	667800
	Bear Island	305	46°58'22"	80°04'40"	5202400	570350
	Ramsey	427	47°26'33"	82°20'14"	5254900	399200
	Gowganda	303	47°39'04"	80°46'32"	5277300	516600
	Moonbeam	294	49°19'16"	82°08'46"	5463600	416650
	Attawapiskat	9	52°56'00"	82°24'00"	NA	NA
	Whitney	412	45°32'21"	78°15'35"	5045950	713950
Northwestern	Dorion	294	48°50'33"	88°36'45"	5410800	382150
	Nakina	320	50°10'38"	86°42'40"	5558150	520950
	Ear Falls	350	50°38'31"	93°13'13"	5609800	484150
	Pickle Lake	360	51°27'41"	90°12'04"	5704800	694550
	Lac la Croix	368	48°21'16"	92°12'32"	5353900	558400
	Quetico Centre	420	48°44'24"	91°12'08"	5399750	632100
	E.L.A.	123	49°39'22"	93°43'28"	5500950	447350
	Winisk	9	55°12'00"	85°08'00"	NA	NA

PART III

SOUTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/LO-VOL #1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-HOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
NOV 30,81	OCT 14,81	1220	900	94590.0	99006	2	1		Z
JAN 5,82	DEC 10,81	900	800	52910.0	99008	2	1		Z
FEB 2,82	JAN 5,82	800	800	91060.0	99013	2	1		
MAR 2,82	FEB 2,82	810	810	64560.0	99018	2	1	I	
MAR 30,82	MAR 2,82	825	745	65200.0	99024	2	1		
APR 27,82	MAR 30,82	805	740	*********	99030	2	1	G	
MAY 25,82	APR 27,82	740	1500	*********	99039	2	1	A	
JUN 22,82	MAY 25,82	1500	815	74350.0	99045	2	1		
JUL 20,82	JUN 22,82	820	820	74040.0	99053	2	1		
AUG 17,82	JUL 20,82	820	815	74600.0	99064	2	1	I	
SEP 14,82	AUG 17,82	815	815	73930.0	99074	2	1	H	
OCT 12,82	SEP 14,82	815	730	76960.0	99082	2	1		
NOV 9,82	OCT 12,82	730	800	71780.0	99088	2	1		
DEC 7,82	NOV 9,82	800	830	*********	99094	2	1	A	
JAN 4,83	DEC 7,82	830	800	64520.0	99100	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M***3	SULPHATE UG/M***3	TOTAL N -NITRATE UG/M***3	CALCIUM UG/M***3	CHLORIDE UG/M***3	POTASSIM UG/M***3	SODIUM UG/M***3
NOV 30,81	OCT 14,81	16.18	5.27	1.237	0.518	0.529	******	******
JAN 5,82	DEC 10,81	24.76	5.01	1.304	0.529	0.850	******	******
FEB 2,82	JAN 5,82	34.04	5.00	1.301	0.560	0.791	******	******
MAR 2,82	FEB 2,82	36.71	8.67	2.501	0.186	0.751	******	******
MAR 30,82	MAR 2,82	13.45	5.95	1.530	0.506	0.598	0.050	0.222
APR 27,82	MAR 30,82	******	******	******	******	******	******	******
MAY 25,82	APR 27,82	******	******	******	******	******	******	******
JUN 22,82	MAY 25,82	5.78	******	******	0.691	******	0.131	0.151
JUL 20,82	JUN 22,82	5.77	5.00	1.029	0.475	0.358	0.064	0.098
AUG 17,82	JUL 20,82	> 8.94	> 6.70	1.300	1.066	0.590	0.087	0.121
SEP 14,82	AUG 17,82	8.93	> 6.76	1.315	1.096	0.879	U 0.575	U 0.403
OCT 12,82	SEP 14,82	8.28	> 6.50	1.293	0.632	0.617	0.130	0.146
NOV 9,82	OCT 12,82	14.68	******	******	0.936	******	0.139	0.156
DEC 7,82	NOV 9,82	******	******	******	******	******	******	******
JAN 4,83	DEC 7,82	10.85	3.26	0.871	0.468	0.581	0.066	0.198

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : COLCHESTER/CUMULATIVE/LO-VOL #1 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
NOV 30,81	OCT 14,81	0.159	0.074	0.127	0.105	0.0116	0.0067	0.00095
JAN 5,82	DEC 10,81	0.176	0.089	0.128	0.079	0.0085	0.0025	U 0.00680
FEB 2,82	JAN 5,82	0.362	U 0.330	0.198	0.070	0.0165	0.0051	0.00176
MAR 2,82	FEB 2,82	0.136	0.059	0.070	0.096	0.0118	0.0048	0.00217
MAR 30,82	MAR 2,82	0.123	0.074	0.153	0.081	0.0100	0.0084	U 0.00537
APR 27,82	MAR 30,82	*******	*******	*******	*******	*******	*******	*******
MAY 25,82	APR 27,82	*******	*******	*******	*******	*******	*******	*******
JUN 22,82	MAY 25,82	0.159	0.114	0.186	0.079	0.0128	0.0034	0.00067
JUL 20,82	JUN 22,82	0.129	0.051	0.143	0.040	0.0061	0.0027	0.00176
AUG 17,82	JUL 20,82	0.231	0.097	0.353	0.068	0.0100	0.0047	0.00161
SEP 14,82	AUG 17,82	0.178	0.072	0.457	0.054	0.0119	0.0068	0.00135
OCT 12,82	SEP 14,82	0.201	0.086	0.174	0.114	0.0127	0.0045	0.00065
NOV 9,82	OCT 12,82	0.203	0.116	0.256	0.113	0.0109	0.0042	0.00139
DEC 7,82	NOV 9,82	*******	*******	*******	*******	*******	*******	*******
JAN 4,83	DEC 7,82	0.057	0.063	0.134	0.066	0.0113	0.0020	< 0.00078

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
NOV 30,81	OCT 14,81	0.0027	0.043	0.00106
JAN 5,82	DEC 10,81	0.0021	0.034	0.00093
FEB 2,82	JAN 5,82	0.0020	0.054	0.00176
MAR 2,82	FEB 2,82	0.0023	0.045	0.00025
MAR 30,82	MAR 2,82	< 0.0015	0.040	0.00077
APR 27,82	MAR 30,82	*******	*******	*******
MAY 25,82	APR 27,82	*******	*******	*******
JUN 22,82	MAY 25,82	0.0020	0.037	0.00056
JUL 20,82	JUN 22,82	< 0.0014	0.028	0.00057
AUG 17,82	JUL 20,82	0.0013	0.034	0.00097
SEP 14,82	AUG 17,82	< 0.0014	0.041	0.00061
OCT 12,82	SEP 14,82	0.0019	0.053	0.00110
NOV 9,82	OCT 12,82	0.0035	0.044	0.00084
DEC 7,82	NOV 9,82	*******	*******	*******
JAN 4,83	DEC 7,82	< 0.0015	0.079	0.00023

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/LO-VOL #8 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	NOV 30,81	900	1350	63830.0	99011	2	1	I	Z
FEB 2,82	JAN 5,82	1350	1400	79250.0	99017	2	1		
MAR 2,82	FEB 2,82	1400	1400	73820.0	99022	2	1	I	
MAR 30,82	MAR 2,82	1400	1300	55020.0	99028	2	1	A	
APR 28,82	MAR 30,82	1300	1100	77540.0	99034	2	1		
MAY 26,82	APR 28,82	1100	1300	73490.0	99043	2	1		
JUN 24,82	MAY 26,82	1300	1300	82040.0	99049	2	1		
JUL 20,82	JUN 24,82	1300	1300	65790.0	99057	2	1		Z
AUG 17,82	JUL 20,82	1300	1300	72710.0	99068	2	1		
SEP 14,82	AUG 17,82	1300	1300	********	99078	2	1	FG	F
OCT 12,82	SEP 14,82	1300	1300	72980.0	99086	2	1		
NOV 9,82	OCT 12,82	1300	1300	62370.0	99092	2	1		
DEC 7,82	NOV 9,82	1300	1300	********	99098	2	1	IA	F
JAN 4,83	DEC 7,82	1300	1300	64570.0	99104	2	1	B	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M***3	SULPHATE UG/M***3	TOTAL N -NITRATE UG/M***3	CALCIUM UG/M***3	CHLORIDE UG/M***3	POTASSIM UG/M***3	SODIUM UG/M***3
JAN 5,82	NOV 30,81	16.78	4.39	1.285	0.376	0.470	******	******
FEB 2,82	JAN 5,82	18.17	3.81	1.117	0.202	0.675	******	******
MAR 2,82	FEB 2,82	4.66	6.88	0.562	0.339	0.555	******	******
MAR 30,82	MAR 2,82	12.25	4.69	1.364	0.254	0.518	0.064	0.209
APR 28,82	MAR 30,82	3.44	4.06	******	0.490	0.264	0.045	0.100
MAY 26,82	APR 28,82	3.85	6.23	1.290	1.633	0.374	0.075	0.116
JUN 24,82	MAY 26,82	3.33	4.72	0.975	1.426	0.414	0.055	0.122
JUL 20,82	JUN 24,82	3.65	> 7.60	1.046	1.702	0.410	0.080	0.095
AUG 17,82	JUL 20,82	1.24	4.06	0.395	1.154	0.254	0.069	0.083
SEP 14,82	AUG 17,82	******	******	******	******	******	******	******
OCT 12,82	SEP 14,82	1.78	6.33	1.124	0.512	0.536	0.120	0.144
NOV 9,82	OCT 12,82	15.62	******	******	U 1.892	******	0.116	0.152
DEC 7,82	NOV 9,82	******	******	******	******	******	******	******
JAN 4,83	DEC 7,82	9.14	3.33	0.863	0.581	0.503	0.058	0.229

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PALMERSTON/CUMULATIVE/LO-VOL 88

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	NOV 30,81	0.083	0.052	0.124	0.055	0.0039	0.0013	0.00094
FEB 2,82	JAN 5,82	0.126	0.093	0.105	0.038	0.0077	0.0024	0.00303
MAR 2,82	FEB 2,82	0.096	0.038	0.123	0.049	0.0083	0.0033	<T 0.00068
MAR 30,82	MAR 2,82	0.069	0.038	0.085	0.055	0.0055	0.0018	< 0.00091
APR 28,82	MAR 30,82	0.104	0.081	0.129	0.028	0.0071	0.0013	< 0.00064
MAY 26,82	APR 28,82	0.395	0.299	0.558	0.056	0.0204	0.0027	0.00136
JUN 24,82	MAY 26,82	0.140	0.059	0.111	0.045	0.0085	0.0037	0.00061
JUL 20,82	JUN 24,82	0.337	0.204	0.690	0.046	0.0144	0.0023	< 0.00076
AUG 17,82	JUL 20,82	0.175	0.106	0.439	0.044	0.0076	0.0014	< 0.00069
SEP 14,82	AUG 17,82	*******	*******	*******	*******	*******	*******	*******
OCT 12,82	SEP 14,82	0.126	0.048	0.145	0.082	0.0066	0.0014	0.00069
NOV 9,82	OCT 12,82	0.252	0.151	0.192	0.108	0.0109	0.0016	0.00080
DEC 7,82	NOV 9,82	*******	*******	*******	*******	*******	*******	*******
JAN 4,83	DEC 7,82	0.031	0.036	0.174	0.051	0.0036	0.0012	< 0.00077

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	NOV 30,81	<T 0.0016	0.011	0.00111
FEB 2,82	JAN 5,82	0.0014	0.019	0.00087
MAR 2,82	FEB 2,82	0.0024	0.031	0.00083
MAR 30,82	MAR 2,82	< 0.0018	0.036	0.00082
APR 28,82	MAR 30,82	< 0.0013	0.018	0.00084
MAY 26,82	APR 28,82	< 0.0014	0.023	0.00073
JUN 24,82	MAY 26,82	0.0012	0.023	0.00043
JUL 20,82	JUN 24,82	< 0.0015	0.021	0.00125
AUG 17,82	JUL 20,82	< 0.0014	0.016	0.00030
SEP 14,82	AUG 17,82	*******	*******	*******
OCT 12,82	SEP 14,82	< 0.0014	0.023	0.00048
NOV 9,82	OCT 12,82	< 0.0016	0.024	0.00056
DEC 7,82	NOV 9,82	*******	*******	*******
JAN 4,83	DEC 7,82	< 0.0015	0.010	0.00008

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/LO-VOL #3

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	NOV 30,81								
FEB 2,82	JAN 5,82	900	900	47750.0	99009	2	1		
MAR 2,82	FEB 2,82	900	900	80450.0	99014	2	1	IH	FZ
MAR 30,82	MAR 2,82	900	900	75590.0	99019	2	1		
APR 27,82	MAR 30,82	900	900	74560.0	99025	2	1		
MAY 25,82	APR 27,82	900	1300	70660.0	99031	2	1		
JUN 22,82	MAY 25,82	1300	630	78300.0	99040	2	1		
JUL 20,82	JUN 22,82	630	900	68370.0	99046	2	1		
AUG 17,82	JUL 20,82	900	915	80270.0	99054	2	1		
SEP 14,82	AUG 17,82	915	900	70470.0	99065	2	1	E	
OCT 12,82	SEP 14,82	900	930	66990.0	99075	2	1	E	
NOV 9,82	OCT 12,82	930	900	58880.0	99083	2	1		
DEC 7,82	NOV 9,82	900	900	********	99089	2	1		
JAN 4,83	DEC 7,82	1100	900	70090.0	99095	2	1		
				68510.0	99101	2	1	A	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M***3	SULPHATE UG/M***3	TOTAL N -NITRATE UG/M***3	CALCIUM UG/M***3	CHLORIDE UG/M***3	POTASSIM UG/M***3	SODIUM UG/M***3
JAN 5,82	NOV 30,81							
FEB 2,82	JAN 5,82	24.71	5.49	1.776	0.482	0.733	******	******
MAR 2,82	FEB 2,82	34.68	4.79	1.326	0.547	0.727	******	******
MAR 30,82	MAR 2,82	31.75	7.21	2.329	0.265	0.642	******	******
APR 27,82	MAR 30,82	17.17	5.83	1.623	0.389	0.543	0.047	0.204
MAY 25,82	APR 27,82	6.65	5.24	1.326	0.594	0.425	0.046	0.163
JUN 22,82	MAY 25,82	6.44	******	******	1.367	******	0.083	0.128
JUL 20,82	JUN 22,82	3.76	******	******	0.875	******	0.175	0.099
AUG 17,82	JUL 20,82	3.45	> 6.23	0.928	0.368	0.187	0.075	0.031
SEP 14,82	AUG 17,82	3.51	> 6.27	0.958	0.816	0.397	0.085	0.110
OCT 12,82	SEP 14,82	6.03	> 7.46	1.040	0.606	0.373	0.112	0.176
NOV 9,82	OCT 12,82	4.93	6.83	0.960	0.377	0.357	0.102	0.127
DEC 7,82	NOV 9,82	******	******	******	******	******	******	******
JAN 4,83	DEC 7,82	13.80	3.64	0.959	0.297	0.428	0.075	0.154
		14.01	2.99	0.829	0.481	0.467	0.051	0.165

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PORT STANLEY/CUMULATIVE/LO-VOL #3

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	NOV 30,81	0.201	0.136	0.090	0.069	0.0111	0.0027	0.00188
FEB 2,82	JAN 5,82	U 0.522	U 0.485	0.187	0.050	0.0224	0.0039	0.00112
MAR 2,82	FEB 2,82	0.079	0.036	0.075	0.057	0.0114	0.0038	0.00119
MAR 30,82	MAR 2,82	0.125	0.082	0.086	0.062	0.0101	0.0020	0.00201
APR 27,82	MAR 30,82	0.198	0.170	0.139	0.045	0.0142	0.0021	0.00283
MAY 25,82	APR 27,82	0.473	0.370	0.303	0.023	0.0243	0.0032	0.00064
JUN 22,82	MAY 25,82	0.480	0.083	0.319	U 0.137	0.0336	U 0.0059	0.00073
JUL 20,82	JUN 22,82	0.138	0.067	0.081	0.032	0.0062	0.0012	0.00100
AUG 17,82	JUL 20,82	0.179	0.094	0.163	0.058	0.0078	0.0021	< 0.00071
SEP 14,82	AUG 17,82	0.182	0.084	0.122	0.066	0.0107	0.0022	< 0.00075
OCT 12,82	SEP 14,82	0.132	0.062	0.068	0.061	0.0071	0.0017	< 0.00085
NOV 9,82	OCT 12,82	******	******	******	******	******	******	*******
DEC 7,82	NOV 9,82	0.086	0.019	0.057	0.080	0.0033	0.0011	< 0.00071
JAN 4,83	DEC 7,82	0.041	0.051	0.090	0.041	0.0048	0.0012	< 0.00073

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	NOV 30,81	<T 0.0021	0.023	0.00103
FEB 2,82	JAN 5,82	0.0027	0.040	0.00063
MAR 2,82	FEB 2,82	0.0029	0.040	0.00120
MAR 30,82	MAR 2,82	< 0.0013	0.027	0.00040
APR 27,82	MAR 30,82	< 0.0014	0.023	0.00050
MAY 25,82	APR 27,82	0.0019	0.032	0.00088
JUN 22,82	MAY 25,82	< 0.0015	U 0.071	0.00124
JUL 20,82	JUN 22,82	< 0.0012	0.020	0.00022
AUG 17,82	JUL 20,82	< 0.0014	0.017	0.00031
SEP 14,82	AUG 17,82	< 0.0015	0.026	0.00037
OCT 12,82	SEP 14,82	< 0.0017	0.022	0.00042
NOV 9,82	OCT 12,82	******	******	*******
DEC 7,82	NOV 9,82	< 0.0014	0.021	0.00021
JAN 4,83	DEC 7,82	< 0.0015	0.012	0.00015

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/LO-VOL #9

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
NOV 30,81	OCT 19,81	1400	800	49840.0	99007	2	1		FZ
DEC 28,81	NOV 30,81	900	730	********	99012	2	1	A	
FEB 2,82	JAN 5,82	800	1730	********	99016	2	1	AI	
MAR 2,82	FEB 2,82	1730	900	84520.0	99021	2	1	I	
MAR 30,82	MAR 2,82	900	830	52510.0	99027	2	1	A	
APR 27,82	MAR 30,82	830	830	79830.0	99033	2	1		
MAY 25,82	APR 27,82	830	800	77260.0	99042	2	1	I	
JUN 22,82	MAY 25,82	800	815	54920.0	99048	2	1		
JUL 21,82	JUN 22,82	815	1515	64230.0	99056	2	1	F	
AUG 17,82	JUL 21,82	1515	645	57000.0	99067	2	1	DH	
SEP 14,82	AUG 17,82	645	830	49290.0	99077	2	1	F	
OCT 12,82	SEP 14,82	830	800	59450.0	99085	2	1		
NOV 9,82	OCT 12,82	800	845	62230.0	99091	2	1		
DEC 7,82	NOV 9,82	845	845	65500.0	99097	2	1		
JAN 4,83	DEC 7,82	845	830	58950.0	99103	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
NOV 30,81	OCT 19,81	5.02	3.05	0.873	0.221	0.361	******	******
DEC 28,81	NOV 30,81	******	******	******	******	******	******	******
FEB 2,82	JAN 5,82	******	******	******	******	******	******	******
MAR 2,82	FEB 2,82	13.37	4.16	1.006	0.118	0.243	******	******
MAR 30,82	MAR 2,82	11.24	4.38	1.137	0.286	0.314	0.067	0.200
APR 27,82	MAR 30,82	3.76	2.15	0.370	0.138	0.188	0.022	0.097
MAY 25,82	APR 27,82	1.64	1.20	******	0.194	0.155	<T 0.006	0.061
JUN 22,82	MAY 25,82	0.49	2.60	0.414	0.433	0.264	0.041	0.091
JUL 21,82	JUN 22,82	2.65	5.76	0.432	0.433	0.272	0.070	0.074
AUG 17,82	JUL 21,82	0.76	2.77	0.298	0.347	0.211	0.048	0.088
SEP 14,82	AUG 17,82	1.96	4.26	C 451	0.308	0.274	0.071	0.152
OCT 12,82	SEP 14,82	1.68	4.96	0.543	0.266	0.244	0.101	0.135
NOV 9,82	OCT 12,82	5.30	******	******	0.402	******	0.096	0.113
DEC 7,82	NOV 9,82	7.13	3.05	0.950	0.215	0.344	0.057	0.089
JAN 4,83	DEC 7,82	10.01	3.02	0.721	0.254	0.348	0.038	0.165

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SHALLOW LAKE/CUMULATIVE/LO-VOL 89 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
NOV 30,81	OCT 19,81	0.066	0.019	0.042	0.048	0.0026	0.0050	U 0.01124
DEC 28,81	NOV 30,81	******	******	******	******	******	******	*******
FEB 2,82	JAN 5,82	******	******	******	******	******	******	*******
MAR 2,82	FEB 2,82	0.057	0.022	0.041	0.025	0.0049	0.0019	0.00047
MAR 30,82	MAR 2,82	0.069	0.044	0.076	0.036	0.0057	0.0029	0.00190
APR 27,82	MAR 30,82	0.053	0.045	0.038	0.013	0.0038	0.0013	0.00063
MAY 25,82	APR 27,82	0.054	0.030	0.045	0.008	0.0026	0.0032	0.00039
JUN 22,82	MAY 25,82	0.059	0.036	0.102	0.008	0.0055	0.0018	0.00091
JUL 21,82	JUN 22,82	0.100	0.058	0.129	0.025	0.0047	0.0008	< 0.00078
AUG 17,82	JUL 21,82	0.070	0.035	0.091	0.021	0.0026	0.0018	< 0.00088
SEP 14,82	AUG 17,82	0.089	0.030	0.076	0.025	0.0037	0.0020	< 0.00101
OCT 12,82	SEP 14,82	0.081	0.030	0.060	0.044	0.0037	0.0017	0.00084
NOV 9,82	OCT 12,82	0.113	0.051	0.088	0.051	0.0051	0.0008	0.00080
DEC 7,82	NOV 9,82	0.057	0.010	0.047	0.057	0.0043	0.0012	< 0.00076
JAN 4,83	DEC 7,82	0.029	0.030	0.086	0.039	0.0034	0.0014	< 0.00085

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
NOV 30,81	OCT 19,81	<T 0.0020	0.008	0.00100
DEC 28,81	NOV 30,81	******	******	*******
FEB 2,82	JAN 5,82	******	******	*******
MAR 2,82	FEB 2,82	0.0013	0.020	U 0.00284
MAR 30,82	MAR 2,82	< 0.0019	0.021	0.00171
APR 27,82	MAR 30,82	< 0.0013	0.007	0.00119
MAY 25,82	APR 27,82	< 0.0013	0.002	0.00057
JUN 22,82	MAY 25,82	< 0.0018	0.009	0.00022
JUL 21,82	JUN 22,82	< 0.0016	0.009	0.00028
AUG 17,82	JUL 21,82	< 0.0018	0.009	0.00021
SEP 14,82	AUG 17,82	< 0.0020	0.011	0.00020
OCT 12,82	SEP 14,82	< 0.0017	0.016	0.00050
NOV 9,82	OCT 12,82	< 0.0016	0.018	0.00032
DEC 7,82	NOV 9,82	< 0.0015	0.011	0.00015
JAN 4,83	DEC 7,82	< 0.0017	0.008	< 0.00008

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : WILKESPORT/CUMULATIVE/LO-VOL 84

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
DEC 2,81	OCT 13,81	1500	1300	66500.0	99005	2	1		FZ
JAN 5,82	DEC 2,81	1100	1300	55810.0	99010	2	1		Z
FEB 1,82	JAN 5,82	1300	1100	68030.0	99015	2	1	I	
MAR 2,82	FEB 1,82	1100	1210	65160.0	99020	2	1	IA	
MAR 30,82	MAR 17,82	1210	1430	********	99026	2	1		Z
APR 27,82	MAR 30,82	1430	1000	56880.0	99032	2	1	H	
MAY 25,82	APR 27,82	1000	1200	60970.0	99041	2	1		
JUN 22,82	MAY 25,82	1200	900	46780.0	99047	2	1		
JUL 20,82	JUN 22,82	900	1335	********	99055	2	1	F	F
AUG 17,82	JUL 20,82	1335	1300	********	99066	2	1	A	F
SEP 14,82	AUG 17,82	1300	1200	********	99076	2	1	A	
OCT 12,82	SEP 14,82	1200	1500	********	99084	2	1	H	
NOV 8,82	OCT 12,82	1500	1000	********	99090	2	1	G	
DEC 8,82	NOV 8,82	1000	800	59960.0	99096	2	1		Z
JAN 4,83	DEC 8,82	800	1500	69060.0	99102	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
DEC 2,81	OCT 13,81	17.89	5.08	1.256	U 1.654	0.767	******	******
JAN 5,82	DEC 2,81	20.96	6.06	1.398	0.538	0.771	******	******
FEB 1,82	JAN 5,82	37.34	5.03	1.323	0.853	0.904	******	******
MAR 2,82	FEB 1,82	32.07	> 7.67	2.499	0.353	0.852	******	******
MAR 30,82	MAR 17,82	******	******	******	******	******	******	******
APR 27,82	MAR 30,82	5.45	9.14	1.784	2.461	1.064	0.114	0.360
MAY 25,82	APR 27,82	8.36	> 8.20	1.725	U 5.626	0.787	0.119	0.233
JUN 22,82	MAY 25,82	4.43	10.37	2.052	2.373	0.727	0.112	0.150
JUL 20,82	JUN 22,82	******	******	******	******	******	******	******
AUG 17,82	JUL 20,82	******	******	******	******	******	******	******
SEP 14,82	AUG 17,82	******	******	******	******	******	******	******
OCT 12,82	SEP 14,82	******	******	******	******	******	******	******
NOV 8,82	OCT 12,82	******	******	******	******	******	******	******
DEC 8,82	NOV 8,82	15.34	3.97	1.026	0.670	0.567	0.083	0.188
JAN 4,83	DEC 8,82	15.74	3.55	0.764	0.741	0.586	0.083	0.214

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILKESPORT/CUMULATIVE/LO-VOL #4 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
DEC 2,81	OCT 13,81	0.211	0.090	0.137	0.096	0.0105	0.0105	0.00286
JAN 5,82	DEC 2,81	0.147	0.079	0.054	0.063	0.0054	0.0023	<T 0.00090
FEB 1,82	JAN 5,82	0.279	0.206	0.132	0.062	0.0141	0.0035	0.00059
MAR 2,82	FEB 1,82	0.127	0.054	0.058	0.080	0.0121	0.0045	0.00092
MAR 30,82	MAR 17,82	******	******	******	******	******	******	*******
APR 27,82	MAR 30,82	0.369	0.193	0.369	U 0.119	0.0281	0.0062	0.00264
MAY 25,82	APR 27,82	0.820	0.541	0.749	0.051	0.0295	0.0008	0.00164
JUN 22,82	MAY 25,82	0.176	0.107	0.966	0.068	0.0192	0.0043	0.00107
JUL 20,82	JUN 22,82	******	******	******	******	******	******	*******
AUG 17,82	JUL 20,82	******	******	******	******	******	******	*******
SEP 14,82	AUG 17,82	******	******	******	******	******	******	*******
OCT 12,82	SEP 14,82	******	******	******	******	******	******	*******
NOV 8,82	OCT 12,82	******	******	******	******	******	******	*******
DEC 8,82	NOV 8,82	0.046	0.030	0.078	0.085	0.0063	0.0013	< 0.00083
JAN 4,83	DEC 8,82	0.055	0.084	0.096	0.049	0.0055	0.0019	< 0.00072

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
DEC 2,81	OCT 13,81	0.0023	0.035	U 0.00181
JAN 5,82	DEC 2,81	<T 0.0018	0.034	0.00079
FEB 1,82	JAN 5,82	0.0016	0.044	0.00119
MAR 2,82	FEB 1,82	0.0034	0.051	0.00121
MAR 30,82	MAR 17,82	******	******	*******
APR 27,82	MAR 30,82	< 0.0018	0.056	0.00167
MAY 25,82	APR 27,82	0.0033	0.048	0.00105
JUN 22,82	MAY 25,82	0.0021	0.038	0.00064
JUL 20,82	JUN 22,82	******	******	*******
AUG 17,82	JUL 20,82	******	******	*******
SEP 14,82	AUG 17,82	******	******	*******
OCT 12,82	SEP 14,82	******	******	*******
NOV 8,82	OCT 12,82	******	******	*******
DEC 8,82	NOV 8,82	< 0.0017	0.027	0.00025
JAN 4,83	DEC 8,82	< 0.0014	0.017	0.00025

PART IV

CENTRAL REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/LO-VOL #13

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	NOV 30,81	915	810	83840.0	98013	2	1		Z
FEB 2,82	JAN 5,82	812	910	79590.0	98020	2	1		
MAR 2,82	FEB 2,82	915	705	********	98025	2	1	A	F
MAR 30,82	MAR 2,82	710	824	********	98029	2	1	BA	F
APR 27,82	MAR 30,82	824	805	75500.0	10671	2	1		
MAY 25,82	APR 27,82	810	800	70150.0	20475	2	1		
JUN 22,82	MAY 25,82	1400	800	52650.0	20515	2	1		
JUL 20,82	JUN 22,82	725	655	68080.0	20532	2	1		
AUG 17,82	JUL 20,82	700	705	79370.0	20557	2	1		
SEP 14,82	AUG 17,82	700	800	83520.0	20590	2	1		
OCT 12,82	SEP 14,82	755	755	46970.0	20635	2	1		
NOV 9,82	OCT 12,82	800	800	71010.0	20677	2	1		
DEC 7,82	NOV 9,82	800	745	67320.0	20706	2	1		
JAN 4,83	DEC 7,82	800	745	83750.0	20740	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
JAN 5,82	NOV 30,81	10.85	3.60	0.868	0.489	0.268	******	******
FEB 2,82	JAN 5,82	10.55	3.12	0.670	0.072	0.553	******	******
MAR 2,82	FEB 2,82	******	******	******	******	******	******	******
MAR 30,82	MAR 2,82	******	******	******	******	******	******	******
APR 27,82	MAR 30,82	5.88	4.53	0.791	1.046	0.258	0.040	0.143
MAY 25,82	APR 27,82	4.28	3.85	0.567	1.996	0.235	0.050	0.107
JUN 22,82	MAY 25,82	0.82	4.80	0.594	1.212	0.342	0.081	0.109
JUL 20,82	JUN 22,82	2.64	6.05	0.496	3.231	0.272	0.059	0.092
AUG 17,82	JUL 20,82	1.51	3.43	0.296	4.032	0.220	0.050	0.088
SEP 14,82	AUG 17,82	4.03	5.48	0.488	1.676	0.239	0.054	0.093
OCT 12,82	SEP 14,82	4.05	******	******	0.617	******	0.128	U 0.217
NOV 9,82	OCT 12,82	4.60	3.27	0.760	0.670	0.225	0.070	0.113
DEC 7,82	NOV 9,82	6.24	3.42	1.329	0.556	0.304	0.067	0.171
JAN 4,83	DEC 7,82	4.90	2.33	0.543	0.422	0.346	0.048	0.201

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : CAMPBELLFORD/CUMULATIVE/LO-VOL #13 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	NOV 30,81	0.064	0.035	0.032	0.062	0.0069	0.0057	<T 0.00060
FEB 2,82	JAN 5,82	0.098	0.069	0.033	0.046	0.0050	0.0016	0.00075
MAR 2,82	FEB 2,82	******	******	******	******	******	******	*******
MAR 30,82	MAR 2,82	******	******	******	******	******	******	*******
APR 27,82	MAR 30,82	0.110	0.083	0.095	0.042	0.0079	0.0013	0.00133
MAY 25,82	APR 27,82	0.214	0.185	0.128	0.036	0.0107	0.0014	< 0.00071
JUN 22,82	MAY 25,82	0.077	0.059	0.057	0.043	0.0076	0.0028	0.00285
JUL 20,82	JUN 22,82	0.242	0.168	0.153	0.046	0.0110	0.0066	0.00373
AUG 17,82	JUL 20,82	0.237	0.174	0.165	0.040	0.0094	0.0013	0.00227
SEP 14,82	AUG 17,82	0.131	0.065	0.103	0.051	0.0078	0.0036	0.00216
OCT 12,82	SEP 14,82	0.171	0.087	0.088	0.100	0.0132	0.0043	0.00213
NOV 9,82	OCT 12,82	0.094	0.062	0.058	0.055	0.0056	0.0021	< 0.00070
DEC 7,82	NOV 9,82	0.082	0.058	0.055	0.076	0.0052	0.0022	0.00119
JAN 4,83	DEC 7,82	0.032	0.057	0.042	0.061	0.0027	< 0.0006	0.00060

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	NOV 30,81	<T 0.0012	0.007	0.00143
FEB 2,82	JAN 5,82	0.0019	0.005	0.00138
MAR 2,82	FEB 2,82	******	******	*******
MAR 30,82	MAR 2,82	******	******	*******
APR 27,82	MAR 30,82	< 0.0013	0.015	0.00053
MAY 25,82	APR 27,82	< 0.0014	0.010	0.00027
JUN 22,82	MAY 25,82	0.0019	0.022	0.00047
JUL 20,82	JUN 22,82	< 0.0015	0.017	0.00056
AUG 17,82	JUL 20,82	< 0.0013	0.020	0.00015
SEP 14,82	AUG 17,82	< 0.0012	0.022	0.00038
OCT 12,82	SEP 14,82	U 0.0085	0.033	0.00064
NOV 9,82	OCT 12,82	< 0.0014	0.017	0.00028
DEC 7,82	NOV 9,82	0.0015	0.018	0.00067
JAN 4,83	DEC 7,82	0.0018	0.010	0.00032

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/LO-VOL #20

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
SEP 30,81	AUG 31,81	1145	815	74485.3	25175	2	1		Z
OCT 2,81	SEP 30,81	815	1015	*********	97012	2	1		Z
OCT 30,81	OCT 2,81	1017	835	66738.0	97013	2	1	A	
NOV 30,81	OCT 30,81	830	955	90550.0	97014	2	1		Z
JAN 5,82	NOV 30,81	1000	930	104230.0	97015	2	1		Z
FEB 2,82	JAN 5,82	935	900	81510.0	97016	2	1		
MAR 2,82	FEB 2,82	900	1115	*********	97017	2	1	A	
MAR 30,82	MAR 9,82	1515	910	58270.0	97018	2	1		Z
APR 27,82	MAR 30,82	910	940	74160.0	97033	2	1	A	
MAY 25,82	APR 29,82	1300	1030	69300.0	97047	2	1	A	Z
JUN 22,82	MAY 25,82	1035	852	73470.0	97066	2	1		
JUL 20,82	JUN 22,82	852	743	76220.0	97116	2	1		
AUG 17,82	JUL 20,82	744	900	79580.0	97151	2	1		
SEP 14,82	AUG 17,82	900	1210	77730.0	97173	2	1		
OCT 12,82	SEP 14,82	1210	1535	75300.0	97253	2	1		
NOV 9,82	OCT 12,82	1540	940	72490.0	97234	2	1	B	
DEC 7,82	NOV 9,82	1640	1315	76520.0	97264	2	1		
JAN 4,83	DEC 7,82	1320	1200	81550.0	97265	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
SEP 30,81	AUG 31,81	2.05	2.89	0.204	0.103	<W 0.007	0.044	0.030
OCT 2,81	SEP 30,81	******	******	******	******	******	******	******
OCT 30,81	OCT 2,81	U 23.67	1.46	0.266	0.066	0.112	******	******
NOV 30,81	OCT 30,81	2.32	2.04	0.326	0.078	0.127	******	******
JAN 5,82	NOV 30,81	3.84	2.78	0.531	0.034	0.139	******	******
FEB 2,82	JAN 5,82	10.92	2.68	0.454	0.056	0.288	******	******
MAR 2,82	FEB 2,82	******	******	******	******	******	******	******
MAR 30,82	MAR 9,82	7.50	3.81	0.613	0.100	0.180	0.030	0.137
APR 27,82	MAR 30,82	4.68	3.67	0.452	0.216	0.189	0.034	0.111
MAY 25,82	APR 29,82	6.55	3.25	0.397	0.404	0.159	0.051	0.090
JUN 22,82	MAY 25,82	0.82	4.02	0.286	0.147	0.211	0.044	0.078
JUL 20,82	JUN 22,82	2.14	4.33	0.361	0.228	0.151	0.036	0.066
AUG 17,82	JUL 20,82	0.71	2.26	0.182	0.161	0.119	0.028	0.166
SEP 14,82	AUG 17,82	1.97	4.57	0.319	0.154	0.129	0.061	0.096
OCT 12,82	SEP 14,82	1.99	******	******	0.119	******	******	******
NOV 9,82	OCT 12,82	0.97	> 6.90	0.541	0.232	0.276	> 0.690	0.104
DEC 7,82	NOV 9,82	3.14	3.23	0.510	0.136	0.196	> 0.653	0.133
JAN 4,83	DEC 7,82	4.54	2.02	0.543	0.184	0.245	0.031	0.186

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORSET/CUMULATIVE/LO-VOL 820 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
SEP 30,81	AUG 31,81	0.059	0.040	0.021	0.026	0.0021	0.0020	0.00175
OCT 2,81	SEP 30,81	******	******	******	******	******	******	*******
OCT 30,81	OCT 2,81	0.055	0.008	0.016	0.028	0.0015	0.0022	0.00090
NOV 30,81	OCT 30,81	0.062	0.030	0.015	0.035	0.0036	0.0036	0.00066
JAN 5,82	NOV 30,81	0.031	0.012	0.010	0.027	0.0014	0.0038	0.00058
FEB 2,82	JAN 5,82	0.055	0.026	0.052	0.020	0.0031	0.0022	0.00074
MAR 2,82	FEB 2,82	******	******	******	******	******	******	*******
MAR 30,82	MAR 9,82	0.050	0.041	0.033	0.033	0.0026	0.0009	0.00172
APR 27,82	MAR 30,82	0.092	0.071	0.055	0.023	0.0040	0.0013	< 0.00067
MAY 25,82	APR 29,82	0.245	0.188	0.113	0.020	0.0072	0.0051	< 0.00072
JUN 22,82	MAY 25,82	0.105	0.068	0.038	0.028	0.0041	0.0048	0.00068
JUL 20,82	JUN 22,82	0.163	0.102	0.068	0.021	0.0046	0.0013	< 0.00066
AUG 17,82	JUL 20,82	0.128	0.106	0.058	0.019	0.0025	0.0006	< 0.00063
SEP 14,82	AUG 17,82	0.102	0.059	0.044	0.022	0.0039	0.0032	0.00167
OCT 12,82	SEP 14,82	0.048	0.015	0.022	0.033	0.0024	0.0011	< 0.00066
NOV 9,82	OCT 12,82	0.066	0.040	0.050	0.012	0.0048	0.0014	< 0.00069
DEC 7,82	NOV 9,82	0.050	0.026	0.033	0.021	0.0020	< 0.0007	< 0.00065
JAN 4,83	DEC 7,82	0.059	0.033	0.040	0.021	0.0025	0.0018	0.00061

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
SEP 30,81	AUG 31,81	******	0.007	0.00064
OCT 2,81	SEP 30,81	******	******	*******
OCT 30,81	OCT 2,81	<T 0.0015	0.004	0.00030
NOV 30,81	OCT 30,81	<T 0.0011	0.010	0.00098
JAN 5,82	NOV 30,81	<T 0.0010	0.008	0.00078
FEB 2,82	JAN 5,82	<T 0.0012	0.010	0.00118
MAR 2,82	FEB 2,82	******	******	*******
MAR 30,82	MAR 9,82	< 0.0017	0.010	0.00060
APR 27,82	MAR 30,82	< 0.0013	0.009	0.00034
MAY 25,82	APR 29,82	< 0.0014	0.014	0.00035
JUN 22,82	MAY 25,82	< 0.0014	0.007	0.00034
JUL 20,82	JUN 22,82	< 0.0013	0.010	0.00024
AUG 17,82	JUL 20,82	< 0.0013	0.006	0.00015
SEP 14,82	AUG 17,82	< 0.0013	0.012	0.00019
OCT 12,82	SEP 14,82	< 0.0013	0.009	0.00042
NOV 9,82	OCT 12,82	< 0.0014	0.016	0.00034
DEC 7,82	NOV 9,82	< 0.0013	0.015	0.00065
JAN 4,83	DEC 7,82	< 0.0012	0.009	0.00067

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/LO-VOL #10 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
NOV 30,81	OCT 30,81	1400	1030	60840.0	38026	2	1		Z
JAN 5,82	NOV 30,81	1030	1400	97960.0	38036	2	1		Z
FEB 2,82	JAN 5,82	1400	1300	********	38046	2	1	AC	
MAR 2,82	FEB 2,82	1300	900	********	38063	2	1	B	
MAR 30,82	MAR 2,82	900	800	71170.0	38067	2	1		
APR 27,82	MAR 30,82	800	1000	74960.0	10669	2	1		
MAY 25,82	APR 27,82	1000	930	65140.0	38120	2	1		
JUN 22,82	MAY 25,82	930	930	93280.0	38117	2	1		
JUL 20,82	JUN 22,82	930	900	67700.0	38132	2	1		
AUG 17,82	JUL 20,82	1000	800	70850.0	38143	2	1		
SEP 14,82	AUG 17,82	830	915	********	38144	2	1	B	
OCT 12,82	SEP 14,82	800	1100	********	38221	2	1	B	
NOV 9,82	OCT 12,82	900	845	63380.0	38223	2	1		
DEC 7,82	NOV 9,82	845	900	********	38225	2	1	B	
JAN 4,83	DEC 14,82	1015	930	********	40002	2	1	B	Z

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
NOV 30,81	OCT 30,81	11.90	3.65	0.949	0.592	0.403	******	******
JAN 5,82	NOV 30,81	9.36	3.19	0.921	0.265	0.444	******	******
FEB 2,82	JAN 5,82	******	******	******	******	******	******	******
MAR 2,82	FEB 2,82	******	******	******	******	******	******	******
MAR 30,82	MAR 2,82	3.89	0.88	0.355	0.052	0.267	<T 0.011	0.088
APR 27,82	MAR 30,82	10.99	5.18	0.920	0.920	0.494	0.080	U 0.207
MAY 25,82	APR 27,82	> 10.24	******	******	1.566	******	0.084	0.157
JUN 22,82	MAY 25,82	3.93	3.48	0.804	0.465	> 0.804	0.107	0.107
JUL 20,82	JUN 22,82	7.83	> 7.39	1.046	1.196	0.517	0.222	0.151
AUG 17,82	JUL 20,82	5.28	4.38	0.663	0.999	0.416	0.158	0.116
SEP 14,82	AUG 17,82	******	******	******	******	******	******	******
OCT 12,82	SEP 14,82	******	******	******	******	******	******	******
NOV 9,82	OCT 12,82	9.89	4.50	1.073	0.591	0.402	0.107	0.122
DEC 7,82	NOV 9,82	******	******	******	******	******	******	******
JAN 4,83	DEC 14,82	******	******	******	******	******	******	******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MILTON/CUMULATIVE/LO-VOL #10 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
NOV 30,81	OCT 30,81	0.197	0.062	0.230	0.230	0.0117	0.0064	0.00230
JAN 5,82	NOV 30,81	0.091	0.021	0.097	0.073	0.0067	0.0025	0.00061
FEB 2,82	JAN 5,82	******	******	******	******	******	******	*******
MAR 2,82	FEB 2,82	******	******	******	******	******	******	*******
MAR 30,82	MAR 2,82	0.025	0.013	0.017	0.025	0.0014	0.0004	< 0.00070
APR 27,82	MAR 30,82	0.187	0.097	0.294	0.133	0.0173	0.0033	0.00534
MAY 25,82	APR 27,82	0.338	0.137	0.547	0.144	U 0.0230	0.0023	0.00353
JUN 22,82	MAY 25,82	0.161	0.050	0.140	0.120	0.0118	0.0032	0.00536
JUL 20,82	JUN 22,82	0.276	0.164	0.489	0.145	0.0148	0.0074	0.00635
AUG 17,82	JUL 20,82	0.195	0.088	0.378	0.144	0.0134	0.0021	0.00113
SEP 14,82	AUG 17,82	******	******	******	******	******	******	*******
OCT 12,82	SEP 14,82	******	******	******	******	******	******	*******
NOV 9,82	OCT 12,82	0.086	0.021	0.188	0.185	0.0139	0.0028	< 0.00079
DEC 7,82	NOV 9,82	******	******	******	******	******	******	*******
JAN 4,83	DEC 14,82	******	******	******	******	******	******	*******

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
NOV 30,81	OCT 30,81	<T 0.0016	0.043	0.00097
JAN 5,82	NOV 30,81	<T 0.0010	0.017	0.00060
FEB 2,82	JAN 5,82	******	******	*******
MAR 2,82	FEB 2,82	******	******	*******
MAR 30,82	MAR 2,82	< 0.0014	0.010	< 0.00007
APR 27,82	MAR 30,82	< 0.0013	0.039	0.00073
MAY 25,82	APR 27,82	< 0.0015	0.042	0.00012
JUN 22,82	MAY 25,82	< 0.0011	0.036	0.00048
JUL 20,82	JUN 22,82	< 0.0015	0.042	0.00041
AUG 17,82	JUL 20,82	< 0.0014	0.025	0.00040
SEP 14,82	AUG 17,82	******	******	*******
OCT 12,82	SEP 14,82	******	******	*******
NOV 9,82	OCT 12,82	< 0.0016	0.031	0.00050
DEC 7,82	NOV 9,82	******	******	*******
JAN 4,83	DEC 14,82	******	******	*******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/LO-VOL #11

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
NOV 30,81	OCT 30,81	1100	1315	80900.0	38025	2	1		Z
JAN 5,82	NOV 30,81	1315	1600	74610.0	38037	2	1		Z
FEB 2,82	JAN 5,82	1600	1100	77180.0	38047	2	1		
MAR 2,82	FEB 2,82	1100	1250	76230.0	38062	2	1		
MAR 30,82	MAR 2,82	1250	1220	69620.0	38066	2	1		
APR 27,82	MAR 30,82	1220	1600	73040.0	10670	2	1		
MAY 25,82	APR 27,82	1600	1130	61150.0	38119	2	1		
JUN 21,82	MAY 25,82	1130	1230	56860.0	38118	2	1		
JUL 20,82	JUN 21,82	1230	1400	59870.0	38133	2	1		
AUG 16,82	JUL 20,82	1400	1900	67250.0	38145	2	1		
SEP 13,82	AUG 16,82	1900	1820	61150.0	38146	2	1		
OCT 12,82	SEP 13,82	1820	1300	53620.0	38219	2	1		
NOV 8,82	OCT 12,82	1300	1500	52570.0	38222	2	1		
DEC 6,82	NOV 8,82	1700	1600	55750.0	38224	2	1		
JAN 3,83	DEC 6,82	1600	1603	41070.0	40001	2	1	C	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
NOV 30,81	OCT 30,81	3.95	2.78	0.637	0.408	0.000	******	******
JAN 5,82	NOV 30,81	11.04	1.34	0.794	0.099	0.248	******	******
FEB 2,82	JAN 5,82	15.81	0.62	0.570	0.038	0.324	******	******
MAR 2,82	FEB 2,82	1.40	0.20	0.262	<T 0.013	<W 0.007	******	******
MAR 30,82	MAR 2,82	12.55	1.55	0.819	0.187	0.330	0.040	0.137
APR 27,82	MAR 30,82	6.71	4.65	0.797	U 2.601	0.445	0.051	U 0.222
MAY 25,82	APR 27,82	0.71	******	******	0.156	******	<W 0.004	0.065
JUN 21,82	MAY 25,82	1.52	4.97	0.848	1.917	0.317	0.088	0.097
JUL 20,82	JUN 21,82	3.96	7.18	0.780	1.296	0.368	0.121	0.104
AUG 16,82	JUL 20,82	1.39	3.72	0.405	0.776	0.223	0.126	0.086
SEP 13,82	AUG 16,82	4.14	4.55	0.597	0.612	0.311	0.057	0.094
OCT 12,82	SEP 13,82	4.90	6.06	0.675	0.476	0.410	0.093	0.117
NOV 8,82	OCT 12,82	9.07	4.05	1.075	0.558	0.380	0.100	0.128
DEC 6,82	NOV 8,82	8.25	0.58	0.323	0.128	0.215	0.022	0.090
JAN 3,83	DEC 6,82	7.23	3.41	0.737	0.519	0.499	0.073	U 0.243

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : UXBRIDGE/CUMULATIVE/LO-VOL #11

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
NOV 30,81	OCT 30,81	0.085	0.030	0.033	0.037	0.0067	0.0032	0.00136
JAN 5,82	NOV 30,81	0.032	0.019	0.007	0.020	0.0032	0.0012	0.00147
FEB 2,82	JAN 5,82	0.040	0.013	0.012	0.010	0.0034	0.0012	0.00078
MAR 2,82	FEB 2,82	0.016	0.022	0.004	0.007	0.0038	0.0008	<T 0.00066
MAR 30,82	MAR 2,82	0.037	0.022	0.029	0.023	0.0022	0.0007	< 0.00072
APR 27,82	MAR 30,82	0.137	0.097	0.178	0.044	0.0151	0.0021	0.00068
MAY 25,82	APR 27,82	0.026	0.005	0.015	0.002	< 0.0008	< 0.0008	< 0.00082
JUN 21,82	MAY 25,82	0.100	0.066	0.077	0.075	0.0105	0.0018	0.00264
JUL 20,82	JUN 21,82	0.204	0.109	0.129	0.058	0.0100	0.0025	0.00134
AUG 16,82	JUL 20,82	0.116	0.059	0.084	0.054	0.0074	0.0022	< 0.00074
SEP 13,82	AUG 16,82	0.103	0.052	0.078	0.036	0.0057	0.0016	< 0.00082
OCT 12,82	SEP 13,82	0.046	0.016	0.048	0.065	0.0062	0.0024	< 0.00093
NOV 8,82	OCT 12,82	0.067	0.022	0.077	0.095	0.0120	0.0025	< 0.00095
DEC 6,82	NOV 8,82	0.025	0.016	0.016	0.018	< 0.0009	< 0.0009	< 0.00090
JAN 3,83	DEC 6,82	0.116	0.054	0.078	0.063	0.0068	0.0019	0.00122

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
NOV 30,81	OCT 30,81	<T 0.0012	0.017	0.00104
JAN 5,82	NOV 30,81	<T 0.0013	0.002	0.00109
FEB 2,82	JAN 5,82	<T 0.0013	0.003	0.00032
MAR 2,82	FEB 2,82	<T 0.0013	<T 0.001	0.00008
MAR 30,82	MAR 2,82	< 0.0014	0.009	0.00043
APR 27,82	MAR 30,82	< 0.0014	0.027	U 0.00109
MAY 25,82	APR 27,82	< 0.0016	< 0.002	< 0.00008
JUN 21,82	MAY 25,82	< 0.0018	0.021	0.00039
JUL 20,82	JUN 21,82	< 0.0017	0.023	0.00063
AUG 16,82	JUL 20,82	< 0.0015	0.013	0.00071
SEP 13,82	AUG 16,82	< 0.0016	0.020	0.00034
OCT 12,82	SEP 13,82	< 0.0019	0.017	0.00019
NOV 8,82	OCT 12,82	< 0.0019	0.023	0.00032
DEC 6,82	NOV 8,82	< 0.0018	0.006	< 0.00009
JAN 3,83	DEC 6,82	< 0.0024	0.021	0.00066

PART V

SOUTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/LO-VOL #16

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-HOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
NOV 30,81	OCT 30,81	900	900	52450.0	98011	2	1		Z
JAN 5,82	NOV 30,81	800	800	********	98017	2	1	A	FZ
FEB 2,82	JAN 12,82	1230	830	47840.0	98021	2	1		Z
MAR 2,82	FEB 2,82	900	800	76660.0	98027	2	1		
MAR 30,82	MAR 2,82	900	900	********	98028	2	1	AB	
APR 25,82	MAR 30,82	900	1800	********	10672	2	1	AB	Z
MAY 25,82	APR 25,82	1800	750	56670.0	20479	2	1		Z
JUN 22,82	MAY 25,82	1600	800	91060.0	20514	2	1		
JUL 20,82	JUN 22,82	730	700	67410.0	20531	2	1		
AUG 17,82	JUL 20,82	800	800	66540.0	20558	2	1		
SEP 14,82	AUG 17,82	730	730	68110.0	20587	2	1	B	
OCT 12,82	SEP 14,82	730	730	64180.0	20639	2	1		
NOV 9,82	OCT 12,82	730	730	79730.0	20679	2	1		
DEC 7,82	NOV 9,82	730	700	46770.0	20705	2	1		
JAN 4,83	DEC 7,82	700	900	49580.0	20741	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
NOV 30,81	OCT 30,81	3.11	2.44	0.295	0.130	0.152	******	******
JAN 5,82	NOV 30,81	******	******	******	******	******	******	******
FEB 2,82	JAN 12,82	0.35	2.61	0.767	0.109	0.763	******	******
MAR 2,82	FEB 2,82	19.57	3.65	1.180	0.313	0.411	******	******
MAR 30,82	MAR 2,82	******	******	******	******	******	******	******
APR 25,82	MAR 30,82	******	******	******	******	******	******	******
MAY 25,82	APR 25,82	1.23	0.75	0.260	2.294	0.221	0.013	0.128
JUN 22,82	MAY 25,82	2.20	******	******	0.580	******	0.096	0.130
JUL 20,82	JUN 22,82	2.67	5.64	0.601	0.911	0 260	0.059	0.089
AUG 17,82	JUL 20,82	1.05	2.59	0.289	0.822	0.240	0.068	0.158
SEP 14,82	AUG 17,82	2.94	2.52	0.224	0.402	0.161	0.033	0.084
OCT 12,82	SEP 14,82	1.56	******	******	0.386	******	0.047	0.105
NOV 9,82	OCT 12,82	3.47	3.89	0.759	0.991	0.270	0.122	0.144
DEC 7,82	NOV 9,82	7.78	4.49	1.582	0.556	0.460	0.118	0.257
JAN 4,83	DEC 7,82	13.11	3.93	0.666	0.913	0.877	0.106	0.514

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DALHOUSIE MILLS/CUMULATIVE/LO-VOL #16

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
NOV 30,81	OCT 30,81	0.078	0.027	0.025	0.040	0.0044	0.0063	0.00210
JAN 5,82	NOV 30,81	******	******	******	******	******	******	*******
FEB 2,82	JAN 12,82	0.059	0.017	0.038	0.054	0.0142	0.0027	0.00334
MAR 2,82	FEB 2,82	0.073	0.043	0.035	0.053	0.0130	0.0027	0.00339
MAR 30,82	MAR 2,82	******	******	******	******	******	******	*******
APR 25,82	MAR 30,82	******	******	******	******	******	******	*******
MAY 25,82	APR 25,82	0.090	0.026	0.131	0.011	0.0035	0.0044	0.00229
JUN 22,82	MAY 25,82	0.147	0.110	0.086	0.072	0.0165	0.0033	U 0.00604
JUL 20,82	JUN 22,82	0.185	0.095	0.317	0.055	0.0089	0.0022	0.00178
AUG 17,82	JUL 20,82	0.162	0.146	0.105	0.059	0.0075	0.0038	0.00346
SEP 14,82	AUG 17,82	0.097	0.065	0.052	0.050	0.0044	0.0015	< 0.00073
OCT 12,82	SEP 14,82	0.070	0.042	0.031	0.044	0.0028	0.0039	< 0.00078
NOV 9,82	OCT 12,82	0.138	0.097	0.087	0.088	U 0.0276	0.0025	0.00226
DEC 7,82	NOV 9,82	0.147	0.086	0.077	0.118	U 0.0278	0.0064	0.00385
JAN 4,83	DEC 7,82	0.048	0.079	0.067	0.117	0.0087	0.0026	0.00464

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
NOV 30,81	OCT 30,81	<T 0.0019	0.013	0.00112
JAN 5,82	NOV 30,81	******	******	*******
FEB 2,82	JAN 12,82	0.0077	0.014	0.00169
MAR 2,82	FEB 2,82	0.0095	0.018	0.00077
MAR 30,82	MAR 2,82	******	******	*******
APR 25,82	MAR 30,82	******	******	*******
MAY 25,82	APR 25,82	< 0.0018	0.028	0.00067
JUN 22,82	MAY 25,82	0.0055	0.029	0.00093
JUL 20,82	JUN 22,82	< 0.0015	0.013	0.00027
AUG 17,82	JUL 20,82	< 0.0015	0.013	0.00018
SEP 14,82	AUG 17,82	< 0.0015	0.010	0.00018
OCT 12,82	SEP 14,82	< 0.0016	0.009	0.00016
NOV 9,82	OCT 12,82	0.0044	0.039	0.00063
DEC 7,82	NOV 9,82	0.0107	0.046	0.00182
JAN 4,83	DEC 7,82	0.0020	0.017	0.00054

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/LO-VOL #17 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
OCT 30,81	OCT 7,81	1500	800	55420.0	98006	2	1		Z
NOV 30,81	OCT 30,81	800	1640	76550.0	98010	2	1		Z
JAN 5,82	NOV 30,81	1640	930	97440.0	98015	2	1	HI	Z
FEB 2,82	JAN 5,82	930	950	70020.0	98019	2	1		
MAR 2,82	FEB 2,82	1005	740	78180.0	98024	2	1		
MAR 30,82	MAR 2,82	840	800	76890.0	98032	2	1		
APR 27,82	MAR 30,82	800	730	78110.0	10668	2	1		
MAY 25,82	APR 27,82	730	735	76550.0	20476	2	1		
JUN 22,82	MAY 25,82	800	800	59180.0	20516	2	1		
JUL 20,82	JUN 22,82	750	700	50230.0	20530	2	1	I	
AUG 17,82	JUL 20,82	700	720	********	20559	2	1	A	
SEP 14,82	AUG 17,82	720	710	77480.0	20589	2	1		
OCT 12,82	SEP 14,82	710	730	50660.0	20637	2	1		
NOV 9,82	OCT 12,82	730	715	59330.0	20676	2	1		
DEC 7,82	NOV 9,82	800	1045	41340.0	20707	2	1		
JAN 4,83	DEC 7,82	1050	720	54230.0	20743	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
OCT 30,81	OCT 7,81	1.02	1.44	******	0.114	0.135	0.027	0.077
NOV 30,81	OCT 30,81	2.18	1.89	0.385	0.313	0.196	******	******
JAN 5,82	NOV 30,81	******	3.16	0.670	U 1.026	0.369	******	******
FEB 2,82	JAN 5,82	8.85	0.68	0.318	0.023	0.236	******	******
MAR 2,82	FEB 2,82	10.16	3.52	0.552	0.088	0.064	******	******
MAR 30,82	MAR 2,82	9.53	3.48	0.442	0.232	0.150	0.081	0.146
APR 27,82	MAR 30,82	4.06	******	******	0.294	******	0.032	0.218
MAY 25,82	APR 27,82	1.92	2.77	0.281	0.313	0.202	0.062	0.303
JUN 22,82	MAY 25,82	0.45	3.17	0.161	0.199	0.135	0.068	0.123
JUL 20,82	JUN 22,82	1.46	5.14	******	0.233	0.169	0.050	0.095
AUG 17,82	JUL 20,82	******	******	******	******	******	******	******
SEP 14,82	AUG 17,82	1.51	3.46	0.045	0.156	0.090	0.048	0.087
OCT 12,82	SEP 14,82	0.92	******	******	0.153	******	0.069	0.143
NOV 9,82	OCT 12,82	3.15	2.06	0.249	0.145	0.143	0.038	0.114
DEC 7,82	NOV 9,82	4.04	2.78	0.532	0.239	0.278	0.079	0.188
JAN 4,83	DEC 7,82	3.93	1.71	0.341	0.179	0.286	0.055	0.184

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOLDEN LAKE/CUMULATIVE/LO-VOL #17

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
OCT 30,81	OCT 7,81	0.034	0.016	0.027	0.051	0.0032	0.0081	U 0.00686
NOV 30,81	OCT 30,81	0.061	0.044	0.030	0.041	0.0105	0.0072	0.00118
JAN 5,82	NOV 30,81	0.103	0.067	U 0.462	0.056	0.0123	0.0065	0.00092
FEB 2,82	JAN 5,82	0.024	0.013	0.014	0.016	<T 0.0007	0.0011	0.00129
MAR 2,82	FEB 2,82	0.119	0.035	0.042	0.038	0.0088	0.0020	0.00205
MAR 30,82	MAR 2,82	0.060	0.029	0.060	0.049	0.0052	U 0.0072	0.00065
APR 27,82	MAR 30,82	0.110	0.065	0.082	0.032	0.0058	0.0019	0.00064
MAY 25,82	APR 27,82	0.144	0.114	0.089	0.018	0.0072	0.0020	< 0.00065
JUN 22,82	MAY 25,82	0.084	0.046	0.047	0.025	0.0059	0.0025	0.00338
JUL 20,82	JUN 22,82	0.137	0.068	0.066	0.024	0.0050	0.0030	0.00239
AUG 17,82	JUL 20,82	******	******	******	******	******	******	*******
SEP 14,82	AUG 17,82	0.058	0.028	0.042	0.018	0.0026	0.0039	< 0.00065
OCT 12,82	SEP 14,82	0.056	0.017	0.048	0.032	0.0036	0.0039	< 0.00099
NOV 9,82	OCT 12,82	0.062	0.040	0.035	0.024	0.0034	0.0025	< 0.00084
DEC 7,82	NOV 9,82	0.073	0.034	0.047	0.036	0.0024	0.0048	0.00194
JAN 4,83	DEC 7,82	0.078	0.038	0.035	0.038	0.0024	0.0015	< 0.00092

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
OCT 30,81	OCT 7,81	******	0.012	0.00069
NOV 30,81	OCT 30,81	0.0024	0.013	0.00076
JAN 5,82	NOV 30,81	0.0030	0.012	0.00093
FEB 2,82	JAN 5,82	<T 0.0014	0.002	0.00143
MAR 2,82	FEB 2,82	0.0033	0.017	0.00097
MAR 30,82	MAR 2,82	0.0033	0.029	0.00241
APR 27,82	MAR 30,82	< 0.0013	0.012	0.00083
MAY 25,82	APR 27,82	< 0.0013	0.007	0.00090
JUN 22,82	MAY 25,82	< 0.0017	0.005	0.00051
JUL 20,82	JUN 22,82	< 0.0020	0.011	0.00056
AUG 17,82	JUL 20,82	******	******	*******
SEP 14,82	AUG 17,82	< 0.0013	0.008	0.00023
OCT 12,82	SEP 14,82	< 0.0020	0.010	0.00020
NOV 9,82	OCT 12,82	< 0.0017	0.011	0.00025
DEC 7,82	NOV 9,82	< 0.0024	0.021	0.00121
JAN 4,83	DEC 7,82	< 0.0018	0.006	0.00041

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KALADAR/CUMULATIVE/LO-VOL #14 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
NOV 30,81	OCT 30,81	755	758	53320.0	98009	2	1	H	Z
JAN 5,82	NOV 30,81	800	1030	66780.0	98014	2	1	H	Z
FEB 2,82	JAN 5,82	1030	755	75430.0	98022	2	1		
MAR 2,82	FEB 2,82	755	755	68460.0	98023	2	1		
MAR 30,82	MAR 2,82	755	755	64830.0	98030	2	1		
APR 27,82	MAR 30,82	755	800	********	10666	2	1		
MAY 27,82	APR 27,82	800	1400	50770.0	20478	2	1		Z
JUN 22,82	MAY 27,82	1300	805	67220.0	20513	2	1		Z
JUL 20,82	JUN 22,82	802	800	91630.0	20528	2	1		
AUG 17,82	JUL 20,82	802	755	72440.0	20560	2	1		
SEP 14,82	AUG 17,82	800	800	80000.0	20588	2	1		
OCT 12,82	SEP 14,82	800	1445	48980.0	20636	2	1		
NOV 10,82	OCT 12,82	800	955	********	20678	2	1		F

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
NOV 30,81	OCT 30,81	2.57	2.53	0.450	0.169	0.234	******	******
JAN 5,82	NOV 30,81	6.20	2.55	0.479	0.084	0.277	******	******
FEB 2,82	JAN 5,82	6.89	2.45	0.381	0.159	0.882	******	******
MAR 2,82	FEB 2,82	6.28	4.02	0.669	0.048	0.285	******	******
MAR 30,82	MAR 2,82	7.10	0.96	0.582	0.121	0.355	0.054	0.143
APR 27,82	MAR 30,82	******	******	******	******	******	******	******
MAY 27,82	APR 27,82	2.17	0.39	0.143	0.065	0.167	<W 0.005	0.079
JUN 22,82	MAY 27,82	0.99	3.65	0.342	0.289	0.193	0.112	0.093
JUL 20,82	JUN 22,82	2.48	5.04	0.347	0.335	0.158	0.074	0.065
AUG 17,82	JUL 20,82	1.01	2.04	0.193	0.255	0.152	0.041	0.079
SEP 14,82	AUG 17,82	2.29	3.75	0.281	0.235	0.144	0.041	0.075
OCT 12,82	SEP 14,82	2.45	******	******	0.225	******	0.082	0.168
NOV 10,82	OCT 12,82	******	******	******	******	******	******	******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KALADAR/CUMULATIVE/LO-VOL #14 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
NOV 30,81	OCT 30,81	0.064	0.036	0.026	0.062	0.0034	0.0053	<T 0.00094
JAN 5,82	NOV 30,81	0.042	0.018	0.010	0.037	0.0045	0.0072	<T 0.00075
FEB 2,82	JAN 5,82	0.103	0.070	0.076	0.038	0.0046	0.0017	0.00119
MAR 2,82	FEB 2,82	0.070	0.023	0.029	0.004	0.0086	0.0023	U 0.00818
MAR 30,82	MAR 2,82	0.035	0.016	0.014	0.008	0.0023	0.0015	0.00231
APR 27,82	MAR 30,82	******	******	******	******	******	******	*******
MAY 27,82	APR 27,82	0.053	< 0.005	0.013	0.004	0.0006	0.0039	< 0.00098
JUN 22,82	MAY 27,82	0.065	0.037	0.039	0.060	0.0060	0.0022	0.00074
JUL 20,82	JUN 22,82	0.152	0.092	0.071	0.043	0.0055	0.0033	0.00087
AUG 17,82	JUL 20,82	0.100	0.075	0.057	0.037	0.0041	0.0007	0.00110
SEP 14,82	AUG 17,82	0.139	0.052	0.055	0.047	0.0050	0.0025	< 0.00063
OCT 12,82	SEP 14,82	0.092	0.030	0.042	0.061	0.0045	0.0010	< 0.00102
NOV 10,82	OCT 12,82	******	******	******	******	******	******	*******

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
NOV 30,81	OCT 30,81	<T 0.0019	0.015	U 0.02438
JAN 5,82	NOV 30,81	<T 0.0015	0.005	0.00055
FEB 2,82	JAN 5,82	0.0024	0.010	0.00146
MAR 2,82	FEB 2,82	0.0022	0.015	0.00082
MAR 30,82	MAR 2,82	< 0.0015	0.005	0.00031
APR 27,82	MAR 30,82	******	******	*******
MAY 27,82	APR 27,82	< 0.0020	0.010	< 0.00010
JUN 22,82	MAY 27,82	0.0015	0.010	0.00081
JUL 20,82	JUN 22,82	< 0.0011	0.010	0.00024
AUG 17,82	JUL 20,82	< 0.0014	0.006	0.00011
SEP 14,82	AUG 17,82	< 0.0012	0.012	0.00027
OCT 12,82	SEP 14,82	< 0.0020	0.014	0.00041
NOV 10,82	OCT 12,82	******	******	*******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/LO-VOL 815

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
OCT 30,81	OCT 7,81	1610	945	62680.0	98004	2	1		Z
NOV 30,81	OCT 30,81	945	1030	101310.0	98012	2	1	I	Z
JAN 5,82	NOV 30,81	1030	1030	90510.0	98016	2	1		Z
FEB 2,82	JAN 5,82	1030	945	95430.0	98018	2	1	H	
MAR 2,82	FEB 2,82	945	945	92510.0	98026	2	1	IH	
MAR 30,82	MAR 2,82	945	945	********	98031	2	1	AB	
APR 27,82	MAR 30,82	945	945	77970.0	10667	2	1		
MAY 25,82	APR 27,82	945	1600	94690.0	20477	2	1		
JUN 22,82	MAY 25,82	1200	805	69010.0	20512	2	1		
JUL 20,82	JUN 22,82	945	1245	81980.0	20529	2	1		
AUG 17,82	JUL 20,82	1245	1430	74240.0	20556	2	1		
SEP 14,82	AUG 17,82	1430	930	82660.0	20591	2	1		
OCT 12,82	SEP 14,82	930	1100	********	20638	2	1	B	F
NOV 9,82	OCT 12,82	1100	930	********	20675	2	1	B	F
DEC 7,82	NOV 9,82	930	1130	59810.0	20704	2	1		
JAN 4,83	DEC 7,82	1130	1630	69160.0	20742	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M***3	SULPHATE UG/M***3	TOTAL N -NITRATE UG/M***3	CALCIUM UG/M***3	CHLORIDE UG/M***3	POTASSIM UG/M***3	SODIUM UG/M***3
OCT 30,81	OCT 7,81	1.17	1.99	******	0.287	0.526	U 0.315	> 0.798
NOV 30,81	OCT 30,81	1.41	2.57	0.503	0.622	0.242	******	******
JAN 5,82	NOV 30,81	1.40	2.63	0.425	0.091	0.166	******	******
FEB 2,82	JAN 5,82	4.51	2.18	0.587	0.210	0.519	******	******
MAR 2,82	FEB 2,82	15.03	0.89	0.246	0.151	0.076	******	******
MAR 30,82	MAR 2,82	******	******	******	******	******	******	******
APR 27,82	MAR 30,82	3.85	3.65	0.660	1.000	0.276	0.038	0.160
MAY 25,82	APR 27,82	2.61	3.48	0.483	2.535	0.243	0.061	0.135
JUN 22,82	MAY 25,82	3.33	4.42	0.525	1.098	0.261	0.080	0.109
JUL 20,82	JUN 22,82	2.96	4.27	0.293	0.646	0.201	0.055	0.095
AUG 17,82	JUL 20,82	1.21	2.56	0.249	0.599	0.175	0.044	0.094
SEP 14,82	AUG 17,82	2.50	4.81	0.442	0.738	0.218	0.079	0.088
OCT 12,82	SEP 14,82	******	******	******	******	******	******	******
NOV 9,82	OCT 12,82	******	******	******	******	******	******	******
DEC 7,82	NOV 9,82	6.09	3.09	0.744	0.615	0.326	0.075	0.217
JAN 4,83	DEC 7,82	6.32	3.61	0.777	1.108	1.092	0.080	U 0.831

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : SMITH'S FALLS/CUMULATIVE/LO-VOL #15

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
OCT 30,81	OCT 7,81	0.037	0.029	0.089	0.061	0.0045	0.0093	U 0.00798
NOV 30,81	OCT 30,81	0.042	0.031	0.227	0.017	0.0097	0.0062	0.00257
JAN 5,82	NOV 30,81	0.036	0.018	0.038	0.034	0.0048	0.0022	0.00177
FEB 2,82	JAN 5,82	0.057	0.048	0.082	0.051	0.0066	0.0019	0.00115
MAR 2,82	FEB 2,82	0.048	0.011	0.063	0.034	0.0077	0.0031	0.00151
MAR 30,82	MAR 2,82	******	******	******	******	******	******	*******
APR 27,82	MAR 30,82	0.118	0.081	0.359	0.037	0.0115	0.0013	< 0.00064
MAY 25,82	APR 27,82	0.327	0.225	1.046	0.040	0.0232	0.0016	0.00084
JUN 22,82	MAY 25,82	0.113	0.079	0.438	0.055	0.0174	0.0029	0.00362
JUL 20,82	JUN 22,82	0.150	0.098	0.084	0.041	0.0055	0.0024	0.00220
AUG 17,82	JUL 20,82	0.113	0.075	0.187	0.046	0.0061	0.0013	0.00108
SEP 14,82	AUG 17,82	0.140	0.092	0.241	0.057	0.0091	0.0018	0.00387
OCT 12,82	SEP 14,82	******	******	******	******	******	******	*******
NOV 9,82	OCT 12,82	******	******	******	******	******	******	*******
DEC 7,82	NOV 9,82	0.107	0.077	0.219	0.052	0.0117	0.0033	< 0.00084
JAN 4,83	DEC 7,82	0.055	0.080	0.406	0.097	0.0135	0.0019	0.00072

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
OCT 30,81	OCT 7,81	******	0.010	0.00638
NOV 30,81	OCT 30,81	0.0033	0.013	0.00128
JAN 5,82	NOV 30,81	0.0020	0.005	0.00144
FEB 2,82	JAN 5,82	0.0023	0.019	U 0.32480
MAR 2,82	FEB 2,82	0.0019	0.019	U 0.14050
MAR 30,82	MAR 2,82	******	******	*******
APR 27,82	MAR 30,82	< 0.0013	0.015	0.00218
MAY 25,82	APR 27,82	0.0026	0.018	0.00285
JUN 22,82	MAY 25,82	0.0022	0.012	0.00029
JUL 20,82	JUN 22,82	< 0.0012	0.012	0.00039
AUG 17,82	JUL 20,82	< 0.0013	0.010	0.00011
SEP 14,82	AUG 17,82	< 0.0012	0.016	0.00027
OCT 12,82	SEP 14,82	******	******	*******
NOV 9,82	OCT 12,82	******	******	*******
DEC 7,82	NOV 9,82	0.0033	0.024	0.00117
JAN 4,83	DEC 7,82	0.0036	U 0.065	0.00039

PART VI

NORTHEASTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/LO-VOL #28

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 9,82	DEC 7,81	1500	1330	66980.0	35007	2	1	B	Z
FEB 9,82	JAN 9,82	1330	1345	77380.0	35014	2	1		Z
MAR 7,82	FEB 9,82	1345	1515	65530.0	35020	2	1	G	Z
MAY 9,82	MAR 7,82	1515	1310	********	35030	2	1	G	Z
JUN 12,82	MAY 9,82	1310	1603	********	35029	2	1	G	Z
JUL 11,82	JUN 12,82	1603	1330	********	35042	2	1	G	
AUG 15,82	JUL 11,82	1330	1015	********	35043	2	1	B	Z
OCT 17,82	AUG 15,82	1015	1305	143780.0	35054	2	1	B	Z
NOV 22,82	OCT 17,82	1305	1330	93930.0	35060	2	1		Z
DEC 16,82	NOV 22,82	1330	1335	56480.0	35066	2	1		Z
JAN 16,83	DEC 16,82	1325	1315	********	35072	2	1	G	FZ

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
JAN 9,82	DEC 7,81	2.69	2.24	0.127	0.194	U 1.276	U 0.299	U 0.705
FEB 9,82	JAN 9,82	2.33	1.74	0.145	0.125	0.549	> 0.646	0.310
MAR 7,82	FEB 9,82	3.16	3.05	0.072	0.104	0.282	******	******
MAY 9,82	MAR 7,82	******	******	******	******	******	******	******
JUN 12,82	MAY 9,82	******	******	******	******	******	******	******
JUL 11,82	JUN 12,82	******	******	******	******	******	******	******
AUG 15,82	JUL 11,82	******	******	******	******	******	******	******
OCT 17,82	AUG 15,82	0.74	0.85	0.045	0.855	> 0.522	0.050	> 0.348
NOV 22,82	OCT 17,82	0.92	1.14	0.083	0.126	0.266	0.059	0.170
DEC 16,82	NOV 22,82	0.47	3.63	0.776	0.731	> 1.328	U 0.752	> 0.885
JAN 16,83	DEC 16,82	******	******	******	******	******	******	******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : ATTAWAPISKAT/CUMULATIVE/LO-VOL #28

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 9,82	DEC 7,81	0.020	0.018	0.136	0.030	0.0022	0.0034	< 0.0007 0075
FEB 9,82	JAN 9,82	0.027	0.007	0.096	0.010	0.0016	0.0013	< 0.0006 0065
MAR 7,82	FEB 9,82	0.044	0.014	0.063	0.020	0.0055	0.0024	<T 0.0007 0076
MAY 9,82	MAR 7,82	******	******	******	******	******	******	****** ****
JUN 12,82	MAY 9,82	******	******	******	******	******	******	****** ****
JUL 11,82	JUN 12,82	******	******	******	******	******	******	****** ****
AUG 15,82	JUL 11,82	******	******	******	******	******	******	****** ****
OCT 17,82	AUG 15,82	0.065	0.038	0.218	0.008	0.0026	0.0007	< 0.0003 0035
NOV 22,82	OCT 17,82	0.023	0.014	0.042	0.010	0.0016	0.0005	< 0.0005 0053
DEC 16,82	NOV 22,82	0.099	0.051	0.241	0.019	0.0035	U 0.0097	0.0031 0319
JAN 16,83	DEC 16,82	******	******	******	******	******	******	****** ****

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 9,82	DEC 7,81	< 0.0015	0.028	0.00037
FEB 9,82	JAN 9,82	0.0019	0.021	0.00032
MAR 7,82	FEB 9,82	<T 0.0015	0.017	0.00098
MAY 9,82	MAR 7,82	******	******	*******
JUN 12,82	MAY 9,82	******	******	*******
JUL 11,82	JUN 12,82	******	******	*******
AUG 15,82	JUL 11,82	******	******	*******
OCT 17,82	AUG 15,82	< 0.0007	0.005	0.00021
NOV 22,82	OCT 17,82	< 0.0011	0.007	0.00011
DEC 16,82	NOV 22,82	< 0.0018	0.025	0.00044
JAN 16,83	DEC 16,82	******	******	*******

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/LO-VOL #25 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 7,82	NOV 30,81	1500	1645	110500.0	35005	2	1		Z
FEB 2,82	JAN 7,82	1645	1645	78240.0	35009	2	1		Z
MAR 2,82	FEB 2,82	1645	1045	80150.0	35017	2	1		
MAR 30,82	MAR 2,82	1045	920	79330.0	35023	2	1		
APR 27,82	MAR 30,82	920	1355	80880.0	38123	2	1		
MAY 25,82	APR 27,82	1355	1752	82950.0	11289	2	1		
JUN 22,82	MAY 25,82	1752	1230	78580.0	35031	2	1		
JUL 22,82	JUN 22,82	1230	1600	72890.0	35033	2	1		Z
AUG 17,82	JUL 22,82	1600	750	61384.0	35040	2	1		Z
SEP 14,82	AUG 17,82	750	750	80040.0	35046	2	1		
OCT 13,82	SEP 14,82	750	1715	59830.0	35052	2	1		
NOV 9,82	OCT 13,82	1715	1220	56700.0	35057	2	1		
DEC 7,82	NOV 9,82	1215	930	77720.0	35061	2	1		
JAN 4,83	DEC 7,82	930	845	83430.0	35070	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3	H**
JAN 7,82	NOV 30,81	0.75	4.52	0.276	0.054	0.222	U 0.452	0.127	27
FEB 2,82	JAN 7,82	13.22	2.27	0.236	0.082	0.281	0.048	0.316	16
MAR 2,82	FEB 2,82	10.07	2.62	0.322	0.070	0.150	0.050	0.175	75
MAR 30,82	MAR 2,82	2.06	3.28	0.313	0.049	0.019	******	******	**
APR 27,82	MAR 30,82	> 8.25	2.37	0.260	0.129	0.198	0.019	0.083	33
MAY 25,82	APR 27,82	5.35	2.83	0.253	0.205	0.157	0.042	0.103	03
JUN 22,82	MAY 25,82	3.09	3.18	0.156	0.277	0.102	0.045	0.076	76
JUL 22,82	JUN 22,82	0.69	1.40	0.079	0.102	0.096	0.027	0.062	62
AUG 17,82	JUL 22,82	1.91	2.04	0.090	0.157	0.138	0.029	0.086	36
SEP 14,82	AUG 17,82	1.29	3.47	0.209	0.105	0.075	0.044	0.100	00
OCT 13,82	SEP 14,82	2.12	******	******	0.105	******	0.100	0.201	01
NOV 9,82	OCT 13,82	3.30	2.33	0.419	0.191	0.159	0.097	0.115	15
DEC 7,82	NOV 9,82	2.41	1.99	0.309	0.108	0.174	0.064	0.148	48
JAN 4,83	DEC 7,82	3.68	1.52	0.707	0.099	0.114	0.021	0.146	46

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : GOWGANDA/CUMULATIVE/LO-VOL #25

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 2,82	JAN 7,82	0.026	0.014	0.071	0.025	0.0019	0.0019	< 0.00064
MAR 2,82	FEB 2,82	0.051	0.012	0.033	0.016	0.0015	0.0037	0.00062
MAR 30,82	MAR 2,82	0.239	0.177	0.097	0.024	0.0058	0.0064	0.0017
APR 27,82	MAR 30,82	0.077	0.028	0.041	0.016	0.0080	0.0006	< 0.000
MAY 25,82	APR 27,82	0.217	0.145	0.098	0.014	0.0060	0.0030	0.00
JUN 22,82	MAY 25,82	0.201	0.145	0.117	U 0.071	0.0127	0.0089	0.00
JUL 22,82	JUN 22,82	0.120	0.104	0.059	0.008	0.0034	0.0158	0.00
AUG 17,82	JUL 22,82	0.326	0.179	0.112	0.028	0.0081	0.0008	< 0.00
SEP 14,82	AUG 17,82	0.108	0.072	0.047	0.014	0.0027	0.0019	< 0.00
OCT 13,82	SEP 14,82	0.075	0.031	0.044	0.037	0.0030	0.0042	< 0.00
NOV 9,82	OCT 13,82	0.085	0.060	0.049	0.023	0.0035	0.0018	< 0.00
DEC 7,82	NOV 9,82	0.081	0.066	0.044	0.019	0.0026	0.0032	0.00
JAN 4,83	DEC 7,82	0.030	0.011	0.030	0.020	0.0006	0.0030	0.00

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 7,82	NOV 30,81	< 0.0009	0.010	0.00081
FEB 2,82	JAN 7,82	< 0.0013	0.017	0.00179
MAR 2,82	FEB 2,82	< 0.0012	0.012	0.00081
MAR 30,82	MAR 2,82	<T 0.0013	0.016	U 0.00340
APR 27,82	MAR 30,82	< 0.0012	0.007	0.00161
MAY 25,82	APR 27,82	< 0.0012	0.012	0.00241
JUN 22,82	MAY 25,82	< 0.0013	0.019	0.00229
JUL 22,82	JUN 22,82	< 0.0014	0.005	0.00016
AUG 17,82	JUL 22,82	0.0016	0.015	0.00080
SEP 14,82	AUG 17,82	< 0.0012	0.006	0.00019
OCT 13,82	SEP 14,82	< 0.0017	0.023	0.00142
NOV 9,82	OCT 13,82	< 0.0018	0.015	0.00044
DEC 7,82	NOV 9,82	< 0.0013	0.010	0.00039
JAN 4,83	DEC 7,82	< 0.0012	0.013	0.00192

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/LO-VOL #23 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 2,82	JAN 13,82	1130	1300	64040.0	35011	2	1		Z
MAR 2,82	FEB 2,82	1300	1340	86830.0	35016	2	1		
MAR 30,82	MAR 2,82	1340	1100	64050.0	35022	2	1	G	
APR 27,82	MAR 30,82	1100	1030	69260.0	11272	2	1		
MAY 31,82	APR 27,82	1030	1035	100430.0	11293	2	1		Z
JUN 22,82	MAY 31,82	1035	1315	59400.0	35028	2	1		Z
JUL 27,82	JUN 22,82	1315	1355	88980.0	35035	2	1		Z
AUG 17,82	JUL 27,82	1400	1400	51400.0	35037	2	1		Z
SEP 14,82	AUG 18,82	1039	1100	59920.0	35048	2	1		
OCT 18,82	SEP 14,82	1100	1545	50250.0	35053	2	1		Z
NOV 15,82	OCT 18,82	1545	1000	76590.0	35055	2	1		
DEC 8,82	NOV 15,82	1000	1600	72550.0	35062	2	1		Z
JAN 5,83	DEC 8,82	1600	1025	70450.0	35067	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3	SODIUM UG/M**3
FEB 2,82	JAN 13,82	17.91	3.01	0.456	0.231	0.242	0.074	0.26	0.266
MAR 2,82	FEB 2,82	11.29	4.15	0.601	0.107	0.225	0.086	0.21	0.219
MAR 30,82	MAR 2,82	13.54	3.87	0.601	<T 0.016	0.023	******	******	******
APR 27,82	MAR 30,82	8.58	******	******	0.266	******	0.040	0.15	0.159
MAY 31,82	APR 27,82	13.61	> 4.98	0.546	0.309	0.199	0.050	0.08	0.087
JUN 22,82	MAY 31,82	1.07	2.65	0.269	0.283	0.151	0.080	0.09	0.093
JUL 27,82	JUN 22,82	1.43	2.30	0.211	0.170	0.129	0.034	0.07	0.070
AUG 17,82	JUL 27,82	1.04	3.11	0.292	0.220	0.195	0.044	0.14	0.141
SEP 14,82	AUG 18,82	1.56	5.21	0.354	0.187	0.159	0.063	0.13	0.133
OCT 18,82	SEP 14,82	1.79	******	******	0.148	******	0.090	0.17	0.174
NOV 15,82	OCT 18,82	2.18	3.03	0.620	0.227	0.170	0.075	0.11	0.111
DEC 8,82	NOV 15,82	0.74	1.41	0.365	U 3.349	U 0.675	> 0.689	0.36	0.369
JAN 5,83	DEC 8,82	4.73	2.34	1.118	0.179	0.199	0.057	0.16	0.163

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : KILLARNEY/CUMULATIVE/LO-VOL #23

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICI UG/M	NICKEL UG/M**3
FEB 2,82	JAN 13,82	0.127	0.038	0.068	0.035	0.0039	0.0023	0.00	
MAR 2,82	FEB 2,82	0.066	0.029	0.049	0.032	0.0032	0.0035	0.00	
MAR 30,82	MAR 2,82	0.055	0.058	0.017	0.033	0.0056	0.0033	U 0.00	0.00125
APR 27,82	MAR 30,82	0.159	0.055	0.065	0.025	0.0043	0.0022	0.00	0.00058
MAY 31,82	APR 27,82	0.159	0.119	0.082	0.019	0.0070	0.0055	0.00	0.00484
JUN 22,82	MAY 31,82	0.086	0.035	0.051	U 0.062	0.0059	0.0017	U 0.00	0.00072
JUL 27,82	JUN 22,82	0.083	0.046	0.047	0.020	0.0028	0.0011	0.00	0.00100
AUG 17,82	JUL 27,82	0.109	0.056	0.060	0.033	0.0039	0.0010	< 0.00	0.00926
SEP 14,82	AUG 18,82	0.087	0.038	0.048	0.033	0.0037	0.0008	< 0.00	0.00090
OCT 18,82	SEP 14,82	0.066	0.027	0.036	0.036	0.0036	0.0040	< 0.00	0.00097
NOV 15,82	OCT 18,82	0.073	0.044	0.051	0.027	0.0039	0.0013	< 0.00	0.00083
DEC 8,82	NOV 15,82	0.076	0.034	U 0.193	0.007	0.0048	U 0.0131	0.00	0.00099
JAN 5,83	DEC 8,82	0.082	0.057	0.053	0.026	0.0028	0.0014	< 0.00	0.00065
									0.00455
									0.00071

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 2,82	JAN 13,82	< 0.0016	0.017	0.00156
MAR 2,82	FEB 2,82	0.0017	0.018	0.00092
MAR 30,82	MAR 2,82	<T 0.0016	0.007	0.00052
APR 27,82	MAR 30,82	< 0.0014	0.011	0.00085
MAY 31,82	APR 27,82	< 0.0010	0.014	0.00109
JUN 22,82	MAY 31,82	< 0.0017	0.010	0.00042
JUL 27,82	JUN 22,82	< 0.0011	0.007	0.00025
AUG 17,82	JUL 27,82	< 0.0019	0.008	0.00012
SEP 14,82	AUG 18,82	< 0.0017	0.013	0.00017
OCT 18,82	SEP 14,82	< 0.0020	0.014	0.00050
NOV 15,82	OCT 18,82	< 0.0013	0.013	0.00033
DEC 8,82	NOV 15,82	< 0.0014	U 0.054	U 0.00317
JAN 5,83	DEC 8,82	0.0014	0.011	0.00050

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/LO-VOL #22 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	DEC 1,81	1100	1330	95520.0	35006	2	1		Z
FEB 2,82	JAN 5,82	1330	1000	71290.0	35008	2	1		
MAR 2,82	FEB 2,82	1000	1610	93320.0	35018	2	1		
MAR 30,82	MAR 2,82	1610	930	83660.0	35024	2	1		
APR 27,82	MAR 30,82	930	1430	76480.0	11270	2	1		
MAY 27,82	APR 27,82	1430	1000	78310.0	11290	2	1	I	Z
JUN 22,82	MAY 27,82	1000	1130	73280.0	35026	2	1		Z
JUL 23,82	JUN 22,82	1130	1000	76320.0	35032	2	1		Z
AUG 17,82	JUL 23,82	1000	1430	60481.0	35039	2	1		Z
SEP 14,82	AUG 17,82	1430	1030	60320.0	35045	2	1		
OCT 13,82	SEP 14,82	1030	1130	********	35050	2	1	A	
NOV 10,82	OCT 13,82	1130	1010	69140.0	35056	2	1		
DEC 8,82	NOV 10,82	1010	800	119020.0	35064	2	1		
JAN 4,83	DEC 8,82	800	1600	65350.0	35069	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M***3	SULPHATE UG/M***3	TOTAL N -NITRATE UG/M***3	CALCIUM UG/M***3	CHLORIDE UG/M***3	POTASSIM UG/M***3	SODIUM UG/M***3	IUM
JAN 5,82	DEC 1,81	10.96	2.23	0.249	0.074	0.021	0.042	0.154	M***3
FEB 2,82	JAN 5,82	1.12	2.35	0.267	0.107	0.330	0.070	0.375	
MAR 2,82	FEB 2,82	15.72	3.30	0.351	0.094	0.161	0.064	0.225	.154
MAR 30,82	MAR 2,82	1.95	3.53	0.299	0.056	0.072	******	******	.375
APR 27,82	MAR 30,82	6.11	3.43	0.294	0.241	0.327	0.085	0.150	.225
MAY 27,82	APR 27,82	1.37	0.99	0.096	0.092	0.141	0.013	0.057	****
JUN 22,82	MAY 27,82	0.73	4.40	0.154	0.393	0.211	0.089	0.119	.150
JUL 23,82	JUN 22,82	1.18	2.10	0.095	0.191	0.151	0.049	0.075	.057
AUG 17,82	JUL 23,82	1.16	2.15	0.157	0.212	0.223	0.058	0.112	.119
SEP 14,82	AUG 17,82	1.11	2.95	0.182	0.184	0.149	0.066	0.112	.075
OCT 13,82	SEP 14,82	******	******	******	******	******	******	******	.112
NOV 10,82	OCT 13,82	2.85	1.95	0.275	0.194	0.159	0.065	0.094	.112
DEC 8,82	NOV 10,82	0.50	3.17	0.464	0.188	> 0.630	> 0.420	0.412	****
JAN 4,83	DEC 8,82	4.90	1.79	0.696	0.187	0.222	0.046	0.207	.094
									.412
									.207

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MATTAWA/CUMULATIVE/LO-VOL #22 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	DEC 1,81	0.095	0.044	0.037	0.042	0.0031	0.0026	< 0.00052
FEB 2,82	JAN 5,82	0.060	0.022	0.076	0.038	0.0042	0.0021	< 0.00070
MAR 2,82	FEB 2,82	0.097	0.024	0.041	0.041	0.0041	0.0043	0.00054
MAR 30,82	MAR 2,82	0.167	0.087	0.047	0.026	0.0061	0.0019	0.00072
APR 27,82	MAR 30,82	0.340	0.222	0.136	0.024	0.0105	0.0013	0.00065
MAY 27,82	APR 27,82	0.125	0.047	0.046	0.007	0.0032	0.0032	< 0.00064
JUN 22,82	MAY 27,82	0.651	0.787	0.237	0.046	0.0218	0.0027	0.00068
JUL 23,82	JUN 22,82	0.410	0.377	0.166	0.020	0.0098	0.0013	< 0.00066
AUG 17,82	JUL 23,82	0.595	0.413	0.212	0.041	0.0140	0.0017	0.00083
SEP 14,82	AUG 17,82	0.330	0.177	0.143	0.032	0.0096	0.0008	< 0.00083
OCT 13,82	SEP 14,82	******	******	******	******	******	******	*******
NOV 10,82	OCT 13,82	0.376	0.231	0.138	0.029	0.0101	0.0022	< 0.00072
DEC 8,82	NOV 10,82	0.134	0.046	0.096	0.026	0.0059	0.0050	0.00235
JAN 4,83	DEC 8,82	0.413	0.260	0.176	0.032	0.0107	0.0038	0.00122

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	DEC 1,81	< 0.0010	0.018	0.00215
FEB 2,82	JAN 5,82	< 0.0014	0.019	0.00189
MAR 2,82	FEB 2,82	0.0021	0.026	0.00026
MAR 30,82	MAR 2,82	<T 0.0012	0.022	0.00085
APR 27,82	MAR 30,82	< 0.0013	0.012	0.00077
MAY 27,82	APR 27,82	< 0.0013	0.002	0.00031
JUN 22,82	MAY 27,82	< 0.0014	0.014	0.00038
JUL 23,82	JUN 22,82	< 0.0013	0.007	0.00010
AUG 17,82	JUL 23,82	< 0.0017	0.009	0.00010
SEP 14,82	AUG 17,82	< 0.0017	0.012	0.00025
OCT 13,82	SEP 14,82	******	******	*******
NOV 10,82	OCT 13,82	< 0.0014	0.017	0.00029
DEC 8,82	NOV 10,82	0.0013	0.019	< 0.00004
JAN 4,83	DEC 8,82	< 0.0015	0.019	U 0.00230

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/LO-VOL #21

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	DEC 2,81	1400	800	48410.0	35001	2	1	G	FZ
FEB 2,82	JAN 5,82	800	800	70180.0	35010	2	1		
MAR 2,82	FEB 2,82	800	800	86880.0	35015	2	1		
MAR 30,82	MAR 2,82	940	1530	77860.0	35021	2	1	G	
APR 27,82	MAR 30,82	1530	1330	74600.0	11269	2	1		
MAY 25,82	APR 27,82	1330	1530	68930.0	11292	2	1		
JUN 24,82	MAY 25,82	1600	1115	78540.0	35025	2	1		Z
JUL 20,82	JUN 24,82	1115	1630	62400.0	35036	2	1		Z
AUG 17,82	JUL 20,82	1630	1200	64377.0	35038	2	1		
SEP 14,82	AUG 17,82	900	1000	59033.0	35047	2	1		
OCT 12,82	SEP 14,82	1000	900	42070.0	35049	2	1		
NOV 9,82	OCT 12,82	1300	830	56830.0	35059	2	1		
DEC 7,82	NOV 9,82	830	1100	62310.0	35063	2	1		
JAN 4,83	DEC 7,82	1100	800	68250.0	35068	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
JAN 5,82	DEC 2,81	12.19	2.63	0.500	0.111	0.310	0.057	0.222
FEB 2,82	JAN 5,82	12.35	3.14	0.484	0.096	0.470	0.061	0.513
MAR 2,82	FEB 2,82	******	******	******	******	******	******	******
MAR 30,82	MAR 2,82	******	4.08	0.591	0.035	0.058	******	******
APR 27,82	MAR 30,82	2.85	1.45	0.184	0.125	0.114	0.017	0.172
MAY 25,82	APR 27,82	5.22	3.37	0.413	0.392	0.196	0.047	0.094
JUN 24,82	MAY 25,82	0.38	1.59	0.159	0.183	0.115	0.067	0.057
JUL 20,82	JUN 24,82	1.28	2.24	0.228	0.152	0.168	0.020	0.048
AUG 17,82	JUL 20,82	1.86	1.71	0.190	0.151	0.140	0.163	0.058
SEP 14,82	AUG 17,82	1.86	3.69	0.322	0.158	0.169	0.042	0.089
OCT 12,82	SEP 14,82	2.06	******	******	0.155	******	0.143	0.149
NOV 9,82	OCT 12,82	2.41	3.03	0.639	0.209	0.185	0.179	0.114
DEC 7,82	NOV 9,82	2.52	2.49	0.575	0.157	0.217	0.056	0.180
JAN 4,83	DEC 7,82	4.44	2.01	1.001	0.150	0.308	0.033	0.249

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MCKELLAR/CUMULATIVE/LO-VOL #21 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	DEC 2,81	0.046	0.017	0.026	0.036	0.0010	< 0.0010	< 0.00103
FEB 2,82	JAN 5,82	0.046	0.028	0.060	0.030	0.0036	0.0019	< 0.00071
MAR 2,82	FEB 2,82	*******	*******	*******	*******	*******	*******	********
MAR 30,82	MAR 2,82	0.060	0.026	0.022	0.024	0.0082	<T 0.0006	0.00116
APR 27,82	MAR 30,82	0.046	0.017	0.026	0.009	0.0007	0.0020	< 0.00067
MAY 25,82	APR 27,82	0.129	0.096	0.078	0.014	0.0065	0.0044	< 0.00073
JUN 24,82	MAY 25,82	0.053	0.025	0.027	0.007	0.0038	0.0013	0.00318
JUL 20,82	JUN 24,82	0.052	0.030	0.034	0.012	0.0024	0.0008	< 0.00080
AUG 17,82	JUL 20,82	0.082	0.023	0.037	0.020	0.0016	0.0016	< 0.00078
SEP 14,82	AUG 17,82	0.080	0.032	0.035	0.021	0.0030	0.0025	< 0.00085
OCT 12,82	SEP 14,82	0.059	0.021	0.026	0.037	0.0019	0.0012	< 0.00119
NOV 9,82	OCT 12,82	0.081	0.055	0.048	0.035	0.0053	0.0035	< 0.00088
DEC 7,82	NOV 9,82	0.058	0.040	0.036	0.026	0.0032	0.0040	< 0.00080
JAN 4,83	DEC 7,82	0.035	0.021	0.033	0.019	0.0015	0.0015	< 0.00073

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	DEC 2,81	< 0.0021	0.013	0.00114
FEB 2,82	JAN 5,82	< 0.0014	0.019	0.00078
MAR 2,82	FEB 2,82	*******	*******	********
MAR 30,82	MAR 2,82	<T 0.0013	0.010	0.00074
APR 27,82	MAR 30,82	< 0.0013	0.003	0.00019
MAY 25,82	APR 27,82	< 0.0015	0.022	0.00078
JUN 24,82	MAY 25,82	< 0.0013	0.007	0.00028
JUL 20,82	JUN 24,82	< 0.0016	0.006	0.00013
AUG 17,82	JUL 20,82	< 0.0016	0.005	0.00014
SEP 14,82	AUG 17,82	< 0.0017	0.008	0.00017
OCT 12,82	SEP 14,82	< 0.0024	0.014	0.00059
NOV 9,82	OCT 12,82	< 0.0018	0.014	0.00035
DEC 7,82	NOV 9,82	< 0.0016	0.016	0.00032
JAN 4,83	DEC 7,82	< 0.0015	0.010	0.00066

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOOSEBEAM/CUMULATIVE/LO-VOL 827 PAGE : 1

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	DEC 9,81	1100	930	69280.0	35004	2	1		
FEB 2,82	JAN 5,82	930	830	86980.0	35012	2	1		
MAR 2,82	FEB 2,82	830	820	85880.0	35013	2	1		
MAR 30,82	MAR 2,82	820	745	86880.0	35019	2	1		
APR 27,82	MAR 30,82	745	910	84190.0	11271	2	1		
MAY 24,82	APR 27,82	915	2100	77730.0	11291	2	1		
JUN 22,82	MAY 24,82	2110	****	*********	35027	2	1	A	
JUL 22,82	JUN 25,82	1700	1015	60460.0	35034	2	1		
AUG 17,82	JUL 22,82	1015	1000	62100.0	35041	2	1		Z
SEP 14,82	AUG 17,82	1000	900	67450.0	35044	2	1		
OCT 12,82	SEP 14,82	830	915	67288.0	35051	2	1		
NOV 9,82	OCT 12,82	915	1500	78510.0	35058	2	1		
DEC 7,82	NOV 9,82	1500	830	90400.0	35065	2	1		
JAN 6,83	DEC 7,82	830	1000	103080.0	35071	2	1		Z

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
JAN 5,82	DEC 9,81	4.42	1.66	0.173	0.091	0.281	0.040	0.224
FEB 2,82	JAN 5,82	5.37	1.47	0.144	0.105	0.299	0.046	0.270
MAR 2,82	FEB 2,82	4.35	1.86	0.154	0.106	0.204	0.055	0.198
MAR 30,82	MAR 2,82	4.07	2.39	0.118	0.089	0.115	******	******
APR 27,82	MAR 30,82	2.58	******	******	0.169	******	0.024	<W 0.003
MAY 24,82	APR 27,82	3.99	2.60	0.187	0.618	0.154	0.039	0.080
JUN 22,82	MAY 24,82	******	******	******	******	******	******	******
JUL 22,82	JUN 25,82	0.50	1.20	0.041	0.334	0.174	0.045	0.050
AUG 17,82	JUL 22,82	0.25	0.20	0.024	0.123	0.113	<T 0.004	0.060
SEP 14,82	AUG 17,82	1.09	5.19	******	0.375	0.096	0.089	0.133
OCT 12,82	SEP 14,82	0.79	******	******	0.155	******	0.059	0.223
NOV 9,82	OCT 12,82	1.62	1.49	0.143	0.127	0.121	0.038	0.073
DEC 7,82	NOV 9,82	0.33	3.12	0.290	0.299	> 0.830	> 0.553	0.498
JAN 6,83	DEC 7,82	1.94	1.21	0.352	0.101	0.189	0.029	0.204

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : MOONBEAM/CUMULATIVE/LO-VOL #27 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	DEC 9,81	0.017	0.010	0.038	0.022	0.0014	< 0.0007	< 0.00072
FEB 2,82	JAN 5,82	0.061	0.017	0.075	0.014	0.0023	0.0017	< 0.00057
MAR 2,82	FEB 2,82	0.048	0.020	0.047	0.009	0.0017	< 0.0006	< 0.00058
MAR 30,82	MAR 2,82	0.075	0.033	0.036	0.013	0.0047	0.0016	0.00104
APR 27,82	MAR 30,82	0.080	0.029	0.049	0.011	0.0030	0.0012	< 0.00059
MAY 24,82	APR 27,82	0.193	0.154	0.141	0.010	0.0064	< 0.0006	< 0.00064
JUN 22,82	MAY 24,82	******	******	******	******	******	******	*******
JUL 22,82	JUN 25,82	0.084	0.081	0.080	0.006	0.0025	0.0017	< 0.00083
AUG 17,82	JUL 22,82	0.034	0.018	0.027	0.002	< 0.0008	< 0.0008	< 0.00081
SEP 14,82	AUG 17,82	0.064	0.036	0.055	0.016	0.0027	0.0030	0.00148
OCT 12,82	SEP 14,82	0.041	0.023	0.051	0.016	0.0018	0.0030	< 0.00074
NOV 9,82	OCT 12,82	0.034	0.022	0.031	0.011	0.0019	0.0019	0.00153
DEC 7,82	NOV 9,82	0.056	0.031	0.076	0.014	0.0022	U 0.0105	0.00420
JAN 6,83	DEC 7,82	0.019	0.010	0.047	0.013	0.0010	0.0024	< 0.00049

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	DEC 9,81	< 0.0014	0.014	0.00065
FEB 2,82	JAN 5,82	< 0.0011	0.016	U 0.00356
MAR 2,82	FEB 2,82	< 0.0012	0.012	U 0.00407
MAR 30,82	MAR 2,82	<T 0.0012	0.007	0.00127
APR 27,82	MAR 30,82	< 0.0012	0.007	0.00058
MAY 24,82	APR 27,82	< 0.0013	0.011	0.00063
JUN 22,82	MAY 24,82	******	******	*******
JUL 22,82	JUN 25,82	< 0.0017	0.006	0.00053
AUG 17,82	JUL 22,82	0.0016	< 0.002	< 0.00008
SEP 14,82	AUG 17,82	< 0.0015	0.010	0.00037
OCT 12,82	SEP 14,82	< 0.0015	0.009	0.00045
NOV 9,82	OCT 12,82	< 0.0013	0.013	U 0.00242
DEC 7,82	NOV 9,82	U 0.0028	0.018	0.00059
JAN 6,83	DEC 7,82	< 0.0010	0.008	0.00078

PART VII

NORTHWESTERN REGION CUMULATIVE AMBIENT AIR CONCENTRATION RESULTS

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORION/CUMULATIVE/LO-VOL #31

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-HOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 2,82	JAN 5,82	900	915	67000.0	34002	2	1		
MAR 2,82	FEB 2,82	915	915	70820.0	34003	2	1	K	
MAR 30,82	MAR 2,82	915	1015	75640.0	34004	2	1	B	
APR 27,82	MAR 30,82	1015	900	********	34005	2	1	B	
MAY 25,82	APR 27,82	900	915	********	34006	2	1	BI	
JUN 22,82	MAY 25,82	1230	900	76550.0	34007	2	1	B	
JUL 20,82	JUN 22,82	900	900	86520.0	34008	2	1		
AUG 17,82	JUL 20,82	900	900	79090.0	34009	2	1	I	
SEP 14,82	AUG 17,82	900	915	50130.0	34010	2	1		
OCT 12,82	SEP 14,82	915	900	65960.0	34011	2	1	B	
NOV 9,82	OCT 12,82	900	900	********	34012	2	1	BI	
DEC 7,82	NOV 9,82	900	900	56150.0	34013	2	1	B	
JAN 4,83	DEC 7,82	900	930	79350.0	34014	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M***3		SULPHATE UG/M***3	TOTAL N -NITRATE UG/M***3	CALCIUM UG/M***3	CHLORIDE UG/M***3	POTASSIM UG/M***3	SODIUM UG/M***3
FEB 2,82	JAN 5,82	3.24		1.38	0.127	0.064	0.075	******	0.000
MAR 2,82	FEB 2,82	******		2.08	0.169	0.071	0.233	0.131	0.215
MAR 30,82	MAR 2,82	1.76		2.41	0.165	0.111	0.093	0.046	0.148
APR 27,82	MAR 30,82	******		******	******	******	******	******	******
MAY 25,82	APR 27,82	******		******	******	******	******	******	******
JUN 22,82	MAY 25,82	0.91	U	2.55	0.108	0.372	0.091	0.056	0.069
JUL 20,82	JUN 22,82	0.15		0.49	0.006	0.091	0.081	0.029	0.066
AUG 17,82	JUL 20,82	0.21		0.41	0.025	0.159	0.089	0.019	0.054
SEP 14,82	AUG 17,82	0.40		1.55	0.060	0.121	0.120	0.070	0.110
OCT 12,82	SEP 14,82	0.35		1.29	0.072	0.121	0.099	0.076	0.110
NOV 9,82	OCT 12,82	******		******	******	******	******	******	******
DEC 7,82	NOV 9,82	1.07		1.34	0.138	0.175	0.178	0.062	0.129
JAN 4,83	DEC 7,82	******		1.28	0.300	0.159	0.101	0.013	0.110

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : DORION/CUMULATIVE/LO-VOL #31 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIN UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 2,82	JAN 5,82	0.048	0.031	0.054	0.014	0.0099	0.0009	0.00239
MAR 2,82	FEB 2,82	0.037	0.032	0.037	0.009	<T 0.0007	0.0008	<T 0.00071
MAR 30,82	MAR 2,82	0.045	0.028	0.033	0.015	0.0020	0.0013	0.00066
APR 27,82	MAR 30,82	******	******	******	******	******	******	*******
MAY 25,82	APR 27,82	******	******	******	******	******	******	*******
JUN 22,82	MAY 25,82	0.311	0.415	0.410	0.010	0.0124	0.0020	0.00105
JUL 20,82	JUN 22,82	0.050	0.062	0.067	0.003	0.0017	0.0006	< 0.00058
AUG 17,82	JUL 20,82	0.071	0.070	0.107	0.003	0.0038	< 0.0006	0.00101
SEP 14,82	AUG 17,82	0.066	0.068	0.076	0.007	0.0024	0.0010	< 0.00100
OCT 12,82	SEP 14,82	0.042	0.013	0.030	0.009	0.0018	0.0015	< 0.00076
NOV 9,82	OCT 12,82	******	******	******	******	******	******	*******
DEC 7,82	NOV 9,82	0.053	0.071	0.058	0.008	0.0027	0.0018	< 0.00089
JAN 4,83	DEC 7,82	0.052	0.053	0.049	0.005	0.0025	0.0013	< 0.00063

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 2,82	JAN 5,82	<T 0.0015	0.009	0.00040
MAR 2,82	FEB 2,82	******	0.002	0.00044
MAR 30,82	MAR 2,82	< 0.0013	0.007	0.00026
APR 27,82	MAR 30,82	******	******	*******
MAY 25,82	APR 27,82	******	******	*******
JUN 22,82	MAY 25,82	< 0.0013	0.007	0.00024
JUL 20,82	JUN 22,82	< 0.0012	0.003	< 0.00006
AUG 17,82	JUL 20,82	< 0.0013	0.001	< 0.00006
SEP 14,82	AUG 17,82	< 0.0020	0.005	< 0.00010
OCT 12,82	SEP 14,82	< 0.0015	< 0.002	< 0.00008
NOV 9,82	OCT 12,82	******	******	*******
DEC 7,82	NOV 9,82	< 0.0018	0.007	0.00027
JAN 4,83	DEC 7,82	< 0.0013	0.005	0.00013

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/LO-VOL 835

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02 APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	DEC 2,81	1300	930	112100.0	34201	2	1	F	Z
FEB 2,82	JAN 12,82	****	900	68200.0	34202	2	1		Z
MAR 2,82	FEB 2,82	900	915	78988.0	34203	2	1		
MAR 30,82	MAR 2,82	900	945	78700.0	34204	2	1	J	
APR 27,82	MAR 30,82	915	800	70000.0	34205	2	1		
MAY 25,82	APR 27,82	900	900	*********	34206	2	1	G	
JUN 22,82	MAY 25,82	900	915	*********	34207	2	1	G	
JUL 20,82	JUN 22,82	900	900	*********	34208	2	1	G	
AUG 17,82	JUL 20,82	900	900	71260.0	34210	2	1	I	
SEP 14,82	AUG 17,82	900	930	57220.0	34211	2	1	J	
OCT 15,82	SEP 14,82	930	1030	55310.0	34212	2	1	B	Z
NOV 9,82	OCT 15,82	1030	945	56000.0	34213	2	1		Z
DEC 7,82	NOV 9,82	945	1000	62100.0	34214	2	1		
JAN 4,83	DEC 7,82	1000	900	45240.0	34215	2	1	G	

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
JAN 5,82	DEC 2,81	1.34	0.91	0.134	0.030	0.152	0.045	0.132
FEB 2,82	JAN 12,82	2.45	1.50	0.147	0.019	0.073	******	******
MAR 2,82	FEB 2,82	1.73	1.77	0.146	0.067	0.411	U 0.791	0.266
MAR 30,82	MAR 2,82	1.44	2.16	0.159	0.093	0.216	0.029	0.273
APR 27,82	MAR 30,82	0.48	******	******	0.090	******	<T 0.007	0.132
MAY 25,82	APR 27,82	******	******	******	******	******	******	******
JUN 22,82	MAY 25,82	******	******	******	******	******	******	******
JUL 20,82	JUN 22,82	******	******	******	******	******	******	******
AUG 17,82	JUL 20,82	<T 0.05	<T 0.04	0.014	0.194	0.042	******	<T 0.007
SEP 14,82	AUG 17,82	0.58	1.31	0.087	0.104	0.157	> 0.874	0.114
OCT 15,82	SEP 14,82	0.60	0.63	0.059	0.139	0.127	0.036	0.095
NOV 9,82	OCT 15,82	1.84	1.47	0.170	0.275	0.152	0.063	0.116
DEC 7,82	NOV 9,82	0.54	1.80	0.246	0.240	0.177	0.076	0.149
JAN 4,83	DEC 7,82	******	1.49	0.404	0.234	0.155	0.017	0.144

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : EAR FALLS/CUMULATIVE/LO-VOL #35 PAGE : 2

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	DEC 2,81	0.019	0.016	0.020	0.021	<T 0.0004	0.0026	<T 0.00045
FEB 2,82	JAN 12,82	0.018	0.018	0.020	0.023	0.0109	0.0023	0.00191
MAR 2,82	FEB 2,82	0.042	0.028	0.046	0.029	<T 0.0006	0.0024	0.00177
MAR 30,82	MAR 2,82	0.084	0.034	0.030	0.019	0.0032	0.0006	0.00254
APR 27,82	MAR 30,82	0.061	0.031	0.030	0.005	0.0014	0.0007	< 0.00071
MAY 25,82	APR 27,82	******	******	******	******	******	******	*******
JUN 22,82	MAY 25,82	******	******	******	******	******	******	*******
JUL 20,82	JUN 22,82	******	******	******	******	******	******	*******
AUG 17,82	JUL 20,82	0.168	0.168	0.109	0.001	0.0032	0.0007	< 0.00070
SEP 14,82	AUG 17,82	0.085	0.053	0.035	0.014	0.0031	< 0.0009	< 0.00087
OCT 15,82	SEP 14,82	0.052	0.023	0.034	0.011	0.0022	< 0.0009	< 0.00090
NOV 9,82	OCT 15,82	0.150	0.095	0.090	0.017	0.0045	0.0018	< 0.00089
DEC 7,82	NOV 9,82	U 0.354	U 0.242	0.146	0.023	0.0072	0.0032	< 0.00081
JAN 4,83	DEC 7,82	0.071	0.040	0.056	0.007	0.0011	0.0011	< 0.00111

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	DEC 2,81	******	0.002	0.00028
FEB 2,82	JAN 12,82	<T 0.0015	0.007	0.00053
MAR 2,82	FEB 2,82	******	0.005	0.00058
MAR 30,82	MAR 2,82	< 0.0013	0.008	0.00019
APR 27,82	MAR 30,82	< 0.0014	< 0.001	< 0.00007
MAY 25,82	APR 27,82	******	******	*******
JUN 22,82	MAY 25,82	******	******	*******
JUL 20,82	JUN 22,82	******	******	*******
AUG 17,82	JUL 20,82	0.0014	0.004	U 0.00076
SEP 14,82	AUG 17,82	< 0.0017	0.003	0.00014
OCT 15,82	SEP 14,82	< 0.0018	< 0.002	< 0.00009
NOV 9,82	OCT 15,82	< 0.0018	0.017	0.00018
DEC 7,82	NOV 9,82	< 0.0016	0.014	0.00016
JAN 4,83	DEC 7,82	< 0.0022	0.012	0.00011

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NAKINA/CUMULATIVE/LO-VOL #30

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
JAN 5,82	NOV 30,81	1030	845	111980.0	34101	2	1	F	Z
FEB 5,82	JAN 5,82	845	1400	100830.0	34102	2	1	B	Z
MAR 2,82	FEB 5,82	1400	853	72850.0	34103	2	1	B	Z
MAR 30,82	MAR 2,82	857	838	80140.0	34104	2	1		
APR 27,82	MAR 30,82	845	850	84120.0	34105	2	1	E	
MAY 25,82	APR 27,82	920	941	78080.0	34106	2	1		
JUN 22,82	MAY 25,82	945	840	67550.0	34107	2	1	B	
JUL 20,82	JUN 22,82	845	830	70720.0	34108	2	1	B	
AUG 17,82	JUL 20,82	830	835	68020.0	34109	2	1	B	
SEP 14,82	AUG 17,82	840	835	63840.0	34110	2	1	B	
OCT 12,82	SEP 14,82	840	845	69150.0	34111	2	1		
NOV 9,82	OCT 12,82	845	925	73550.0	34112	2	1	B	
DEC 7,82	NOV 9,82	930	915	66810.0	34113	2	1	I	
JAN 4,83	DEC 7,82	925	930	75390.0	34114	2	1		

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M***3		SULPHATE UG/M***3	TOTAL N -NITRATE UG/M***3	CALCIUM UG/M***3	CHLORIDE UG/M***3		POTASSIM UG/M***3	SODIUM UG/M***3
JAN 5,82	NOV 30,81	2.95		1.34	0.152	0.042	0.179		0.123	0.141
FEB 5,82	JAN 5,82	3.67		1.84	0.121	0.054	0.079		******	******
MAR 2,82	FEB 5,82	3.16		2.13	0.126	0.082	0.213		0.079	0.226
MAR 30,82	MAR 2,82	2.96		2.27	0.137	0.125	0.206		0.031	0.143
APR 27,82	MAR 30,82	1.55		******	******	0.373	******		0.018	0.074
MAY 25,82	APR 27,82	0.82		******	******	0.400	******	<T	0.003	0.070
JUN 22,82	MAY 25,82	0.54		1.37	0.026	1.628	0.148		0.059	0.078
JUL 20,82	JUN 22,82	0.24		1.38	0.032	3.224	0.219		0.064	0.081
AUG 17,82	JUL 20,82	0.29		0.99	0.015	2.793	0.228		0.048	0.085
SEP 14,82	AUG 17,82	0.42	U	2.66	******	1.187	0.219		0.118	0.118
OCT 12,82	SEP 14,82	0.43		1.09	0.065	0.376	0.159		0.043	0.130
NOV 9,82	OCT 12,82	1.18		1.56	0.163	0.386	0.136		0.048	0.095
DEC 7,82	NOV 9,82	1.30		1.80	0.172	0.624	0.180		0.060	0.120
JAN 4,83	DEC 7,82	******		1.75	0.285	0.467	0.206		0.033	0.175

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : NAKINA/CUMULATIVE/LO-VOL #30

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
JAN 5,82	NOV 30,81	0.081	0.015	0.022	0.030	0.0007	0.0019	<T 0.00045
FEB 5,82	JAN 5,82	0.109	0.023	0.051	0.027	0.0080	0.0011	0.00159
MAR 2,82	FEB 5,82	0.016	0.023	0.044	0.015	0.0018	0.0022	<T 0.00069
MAR 30,82	MAR 2,82	0.200	0.022	0.035	0.022	0.0031	0.0019	0.00187
APR 27,82	MAR 30,82	0.309	0.051	0.092	0.012	0.0042	0.0012	< 0.00059
MAY 25,82	APR 27,82	0.205	0.045	0.087	0.006	0.0038	0.0077	< 0.00064
JUN 22,82	MAY 25,82	0.413	0.151	0.336	0.010	0.0081	0.0007	0.00118
JUL 20,82	JUN 22,82	0.608	0.238	0.761	0.017	0.0134	0.0021	0.00113
AUG 17,82	JUL 20,82	0.603	0.290	0.604	0.018	0.0147	0.0015	< 0.00074
SEP 14,82	AUG 17,82	0.269	0.081	0.232	0.015	0.0060	0.0016	< 0.00078
OCT 12,82	SEP 14,82	0.213	0.027	0.075	0.015	0.0026	0.0007	< 0.00072
NOV 9,82	OCT 12,82	0.239	0.042	0.073	0.029	0.0038	0.0014	< 0.00068
DEC 7,82	NOV 9,82	0.180	0.120	0.133	0.016	0.0045	0.0030	< 0.00075
JAN 4,83	DEC 7,82	0.095	0.041	0.118	0.013	0.0033	0.0007	< 0.00066

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
JAN 5,82	NOV 30,81	******	0.004	0.00021
FEB 5,82	JAN 5,82	<T 0.0010	0.008	0.00051
MAR 2,82	FEB 5,82	******	0.004	0.00043
MAR 30,82	MAR 2,82	< 0.0012	0.007	0.00050
APR 27,82	MAR 30,82	< 0.0012	0.007	< 0.00006
MAY 25,82	APR 27,82	< 0.0013	0.005	0.00008
JUN 22,82	MAY 25,82	< 0.0015	0.005	0.00018
JUL 20,82	JUN 22,82	< 0.0014	0.004	0.00017
AUG 17,82	JUL 20,82	< 0.0015	0.003	< 0.00007
SEP 14,82	AUG 17,82	< 0.0016	0.007	U 0.00102
OCT 12,82	SEP 14,82	< 0.0014	0.004	0.00007
NOV 9,82	OCT 12,82	< 0.0014	0.005	0.00007
DEC 7,82	NOV 9,82	< 0.0015	0.012	0.00015
JAN 4,83	DEC 7,82	< 0.0013	0.009	0.00020

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/LO-VOL #36

REMOVAL DATE	EXPOSURE DATE	SAMPLING START HR.	SAMPLING END HR.	FLOW VOLUME(L)	SAMPLE NUMBER	PROJECT CODE 02-APIOS 03-SPECIAL	SUBPROJECT CODE 01-MOE 03-AES 04-ON HYDRO	COMMENTS FIELD	COMMENTS OFFICE
FEB 2,82	JAN 5,82	1030	1130	77740.0	34301	2	1		
MAR 2,82	FEB 2,82	1130	920	75720.0	34302	2	1		
MAR 30,82	MAR 2,82	1015	1022	70940.0	34303	2	1		
APR 27,82	MAR 30,82	1020	950	56730.0	34304	2	1		
MAY 27,82	APR 27,82	950	730	55380.0	34305	2	1		Z
JUN 29,82	MAY 27,82	730	1210	41700.0	34306	2	1	AG	FZ
JUL 20,82	JUN 29,82	1415	1030	47150.0	34307	2	1	G	Z
AUG 18,82	JUL 20,82	1030	1120	66370.0	34308	2	1	B	
SEP 14,82	AUG 18,82	1115	1310	51080.0	34309	2	1	G	
OCT 13,82	SEP 14,82	1310	1000	53920.0	34310	2	1		
NOV 15,82	OCT 13,82	1000	1130	********	34311	2	1	G	FZ
DEC 7,82	NOV 15,82	1130	1030	********	34312	2	1	G	FZ
JAN 10,83	DEC 7,82	1035	1055	90520.0	34313	2	1		Z

REMOVAL DATE	EXPOSURE DATE	SULPHUR DIOXIDE UG/M**3	SULPHATE UG/M**3	TOTAL N -NITRATE UG/M**3	CALCIUM UG/M**3	CHLORIDE UG/M**3	POTASSIM UG/M**3	SODIUM UG/M**3
FEB 2,82	JAN 5,82	0.39	> 6.43	0.087	<T 0.013	> 0.965	******	******
MAR 2,82	FEB 2,82	3.96	2.11	0.116	0.081	0.297	U 0.304	0.287
MAR 30,82	MAR 2,82	1.79	1.09	0.067	0.072	0.444	<T 0.011	0.109
APR 27,82	MAR 30,82	2.70	******	******	0.211	******	<T 0.009	0.115
MAY 27,82	APR 27,82	0.90	******	******	0.264	******	<T 0.005	0.095
JUN 29,82	MAY 27,82	0.32	0.42	0.000	0.162	0.168	0.030	0.078
JUL 20,82	JUN 29,82	0.57	1.06	0.053	0.660	0.170	0.042	0.090
AUG 18,82	JUL 20,82	0.25	0.19	0.004	0.099	0.113	<W 0.004	0.060
SEP 14,82	AUG 18,82	0.46	0.93	0.049	0.160	0.225	0.029	0.171
OCT 13,82	SEP 14,82	0.31	0.56	0.056	0.146	0.130	0.028	0.107
NOV 15,82	OCT 13,82	******	******	******	******	******	******	******
DEC 7,82	NOV 15,82	******	******	******	******	******	******	******
JAN 10,83	DEC 7,82	******	0.97	0.213	0.076	0.088	0.006	0.091

ONTARIO MINISTRY OF THE ENVIRONMENT
AIR SAMPLING ANALYSIS RESULTS
APIOS - ACIDIC PRECIPITATION IN ONTARIO STUDY

STATION NAME : PICKLE LAKE/CUMULATIVE/LO-VOL #36

REMOVAL DATE	EXPOSURE DATE	IRON UG/M**3	ALUMNIUM UG/M**3	MAGNESIM UG/M**3	LEAD UG/M**3	MANGANSE UG/M**3	COPPER UG/M**3	NICKEL UG/M**3
FEB 2,82	JAN 5,82	0.036	0.060	0.033	0.021	0.0053	0.0031	U 0.00617
MAR 2,82	FEB 2,82	0.044	0.017	0.048	0.013	<T 0.0007	0.0041	<T 0.00066
MAR 30,82	MAR 2,82	0.030	0.017	0.018	0.028	0.0007	0.0014	< 0.00070
APR 27,82	MAR 30,82	0.086	0.044	0.059	0.016	0.0018	0.0009	< 0.00088
MAY 27,82	APR 27,82	0.099	0.040	0.060	0.007	0.0045	0.0018	0.00145
JUN 29,82	MAY 27,82	0.052	0.029	0.038	0.002	0.0012	0.0012	0.00192
JUL 20,82	JUN 29,82	0.348	0.195	0.180	0.013	0.0053	0.0085	< 0.00106
AUG 18,82	JUL 20,82	0.044	0.013	0.021	0.003	< 0.0008	0.0008	< 0.00075
SEP 14,82	AUG 18,82	0.065	0.015	0.037	0.010	0.0016	0.0049	< 0.00098
OCT 13,82	SEP 14,82	0.047	0.014	0.033	0.010	0.0015	0.0009	< 0.00093
NOV 15,82	OCT 13,82	******	******	******	******	******	******	*******
DEC 7,82	NOV 15,82	******	******	******	******	******	******	*******
JAN 10,83	DEC 7,82	0.020	0.007	0.020	0.008	0.0006	0.0006	< 0.00055

REMOVAL DATE	EXPOSURE DATE	VANADIUM UG/M**3	ZINC UG/M**3	CADMIUM UG/M**3
FEB 2,82	JAN 5,82	U 0.0095	0.007	0.00051
MAR 2,82	FEB 2,82	******	0.007	0.00045
MAR 30,82	MAR 2,82	< 0.0014	0.005	< 0.00007
APR 27,82	MAR 30,82	< 0.0018	0.003	< 0.00009
MAY 27,82	APR 27,82	< 0.0018	0.002	< 0.00009
JUN 29,82	MAY 27,82	< 0.0024	0.005	< 0.00012
JUL 20,82	JUN 29,82	< 0.0021	0.006	< 0.00011
AUG 18,82	JUL 20,82	0.0015	< 0.002	0.00042
SEP 14,82	AUG 18,82	< 0.0020	0.009	0.00016
OCT 13,82	SEP 14,82	< 0.0019	< 0.002	< 0.00009
NOV 15,82	OCT 13,82	******	******	*******
DEC 7,82	NOV 15,82	******	******	*******
JAN 10,83	DEC 7,82	< 0.0011	0.004	0.00011